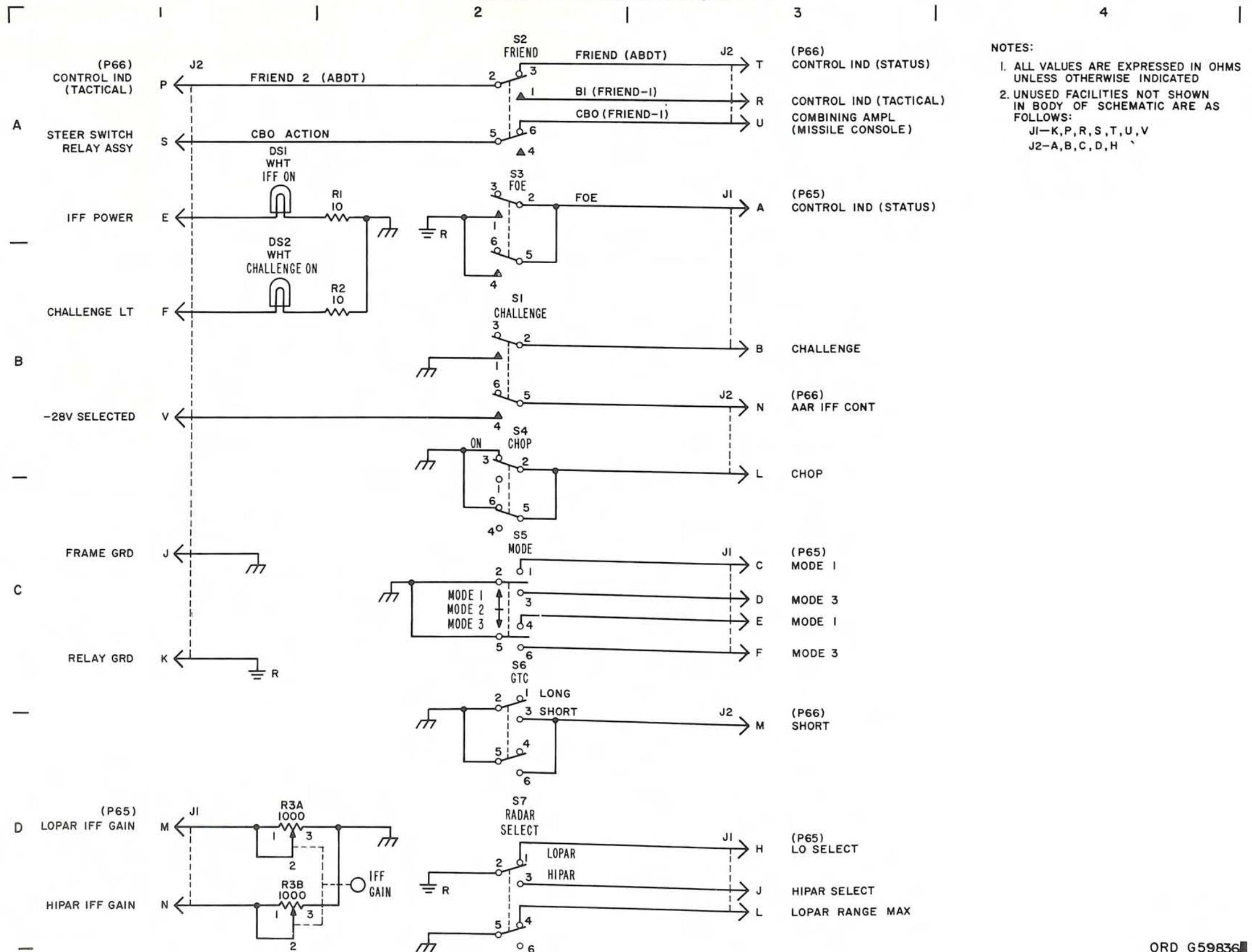


(U) LOPAR Control-Indicator 9993021—Apparatus List

Ref desig	Value	Mfr's rating			Type, part, or drawing no.	Remarks
		Tol $\pm\%$	Watts	Volts		
B1					7674819	
C1	0.01	10		300	CM35B103JN3	
CR1					7605693	
CR2					8519051	
DS1					MS25231-1819	
DS2					7605718	
DS3					8328095	
DS4					MS25237-327	
J1					9976306-2	
J2					9976306-1	
K1,K2					9011925	
M1					8174005	
R1	0.1 meg	10	2		9000886	
R2	10,000	10	2		8205674	
R3	8,200	5	1/2		MS35043-109	
R4	2.2 meg	10	1/2		MS35043-33	
R5	24,000	5	1/2		MS35043-120	
R6	3,840	1	1/8		9144321	
R7	1300	5	1		MS35044-88	
R8	62,000	5	1/2		MS35043-130	
S1					MS35059-27	
S2					9144148	
S3					8005247	
S4					9001465	
S5					9001495	
S6					8512470	
S7					9000774	
S8					9011495	
S9					9011494	
S10					9988814	

CONFIDENTIAL - Modified Handling Authorized



ORD G59836

Figure 84 (U). IFF control-indicator 9156348—schematic diagram (U).

CONFIDENTIAL

MEASUREMENT NOTES

1. General

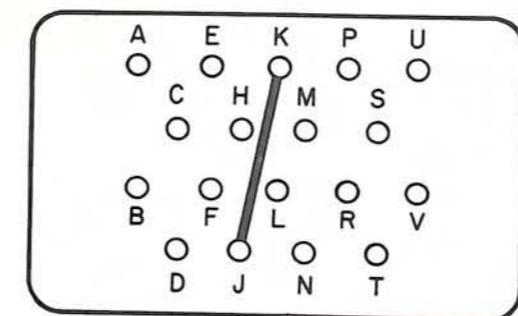
- a. Measurements are made with all variable resistors adjusted for normal operation and all tubes in sockets.
- b. Notation 3 to 4 in the Pin column indicates that measurement is made between pins 3 and 4.
- c. All values given are typical.

2. Voltage

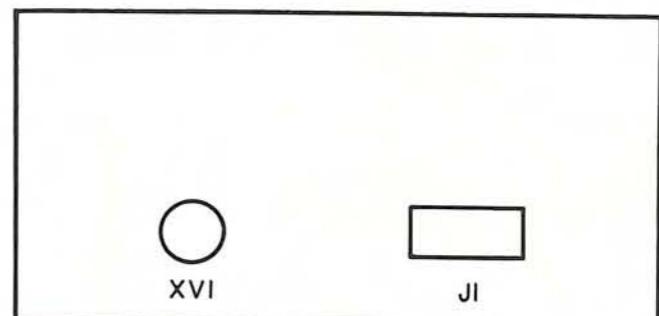
- a. Measurements are made with system energized through low voltage condition.
- b. Measurements are made with electronic multimeter TS-505/U using the scale that permits reading nearest full scale.
- c. Voltages are +dc measured to ground, unless otherwise indicated.

3. Resistance

- a. Measurements are made with multimeter TS-352/U using the scale that permits reading nearest midscale.
- b. Measurements are made with all external cables disconnected and connector J1 strapped as indicated.
- c. Resistances are measured to ground unless otherwise indicated.



PIN STRAPPING ARRANGEMENT FOR J1

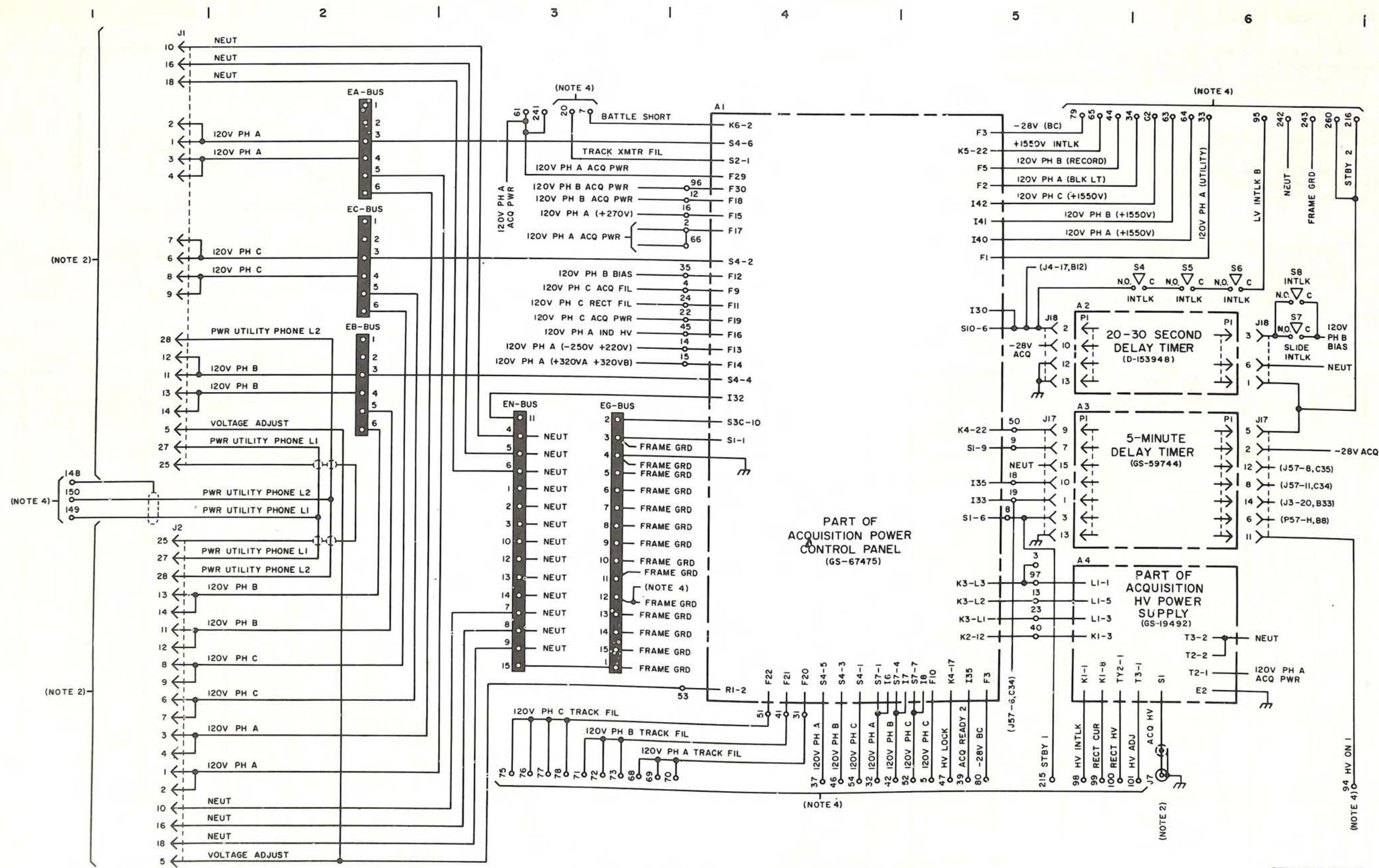


BOTTOM VIEW OF CHASSIS

Ref desig		Tube type	Tube function	Plate			Suppressor			Screen			Control			Cathode			Filament		
Socket	Tube			Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms
XV1	V1	5727/ 2D21W	Voltage regulator	6	28	100,000				5	0	0	1	6	940,000	2	0	0	3 to 4	6.3 ac	3

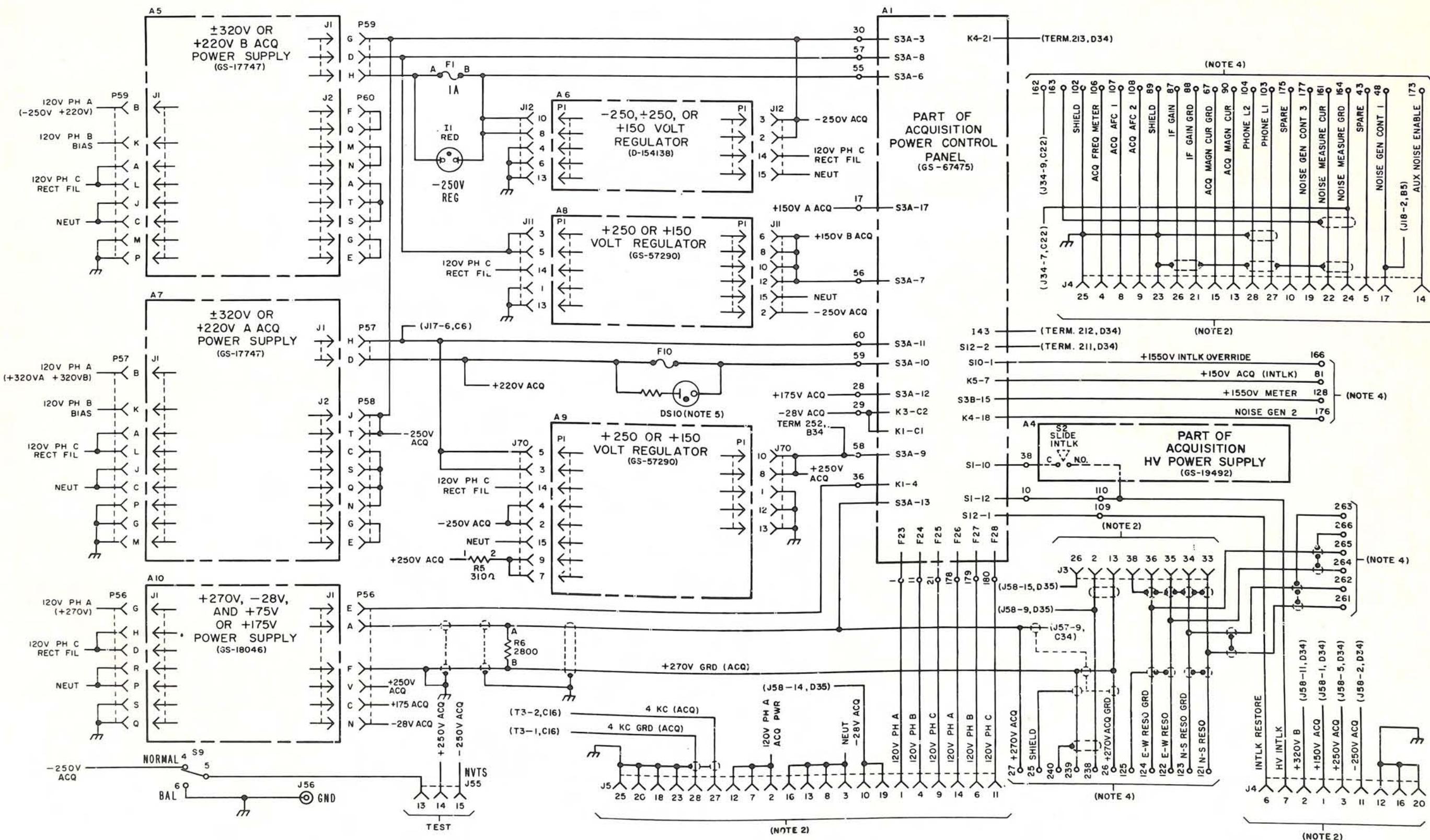
Figure 85A (U). Alarm control 9156414—voltage and resistance chart. (U).

CONFIDENTIAL



■ Figure 86 (U). Director station group 9995968—schematic diagram (sheet 1 of 8) (U).

CONFIDENTIAL



■ Figure 86 (U). Continued (sheet 2 of 8)

CONFIDENTIAL

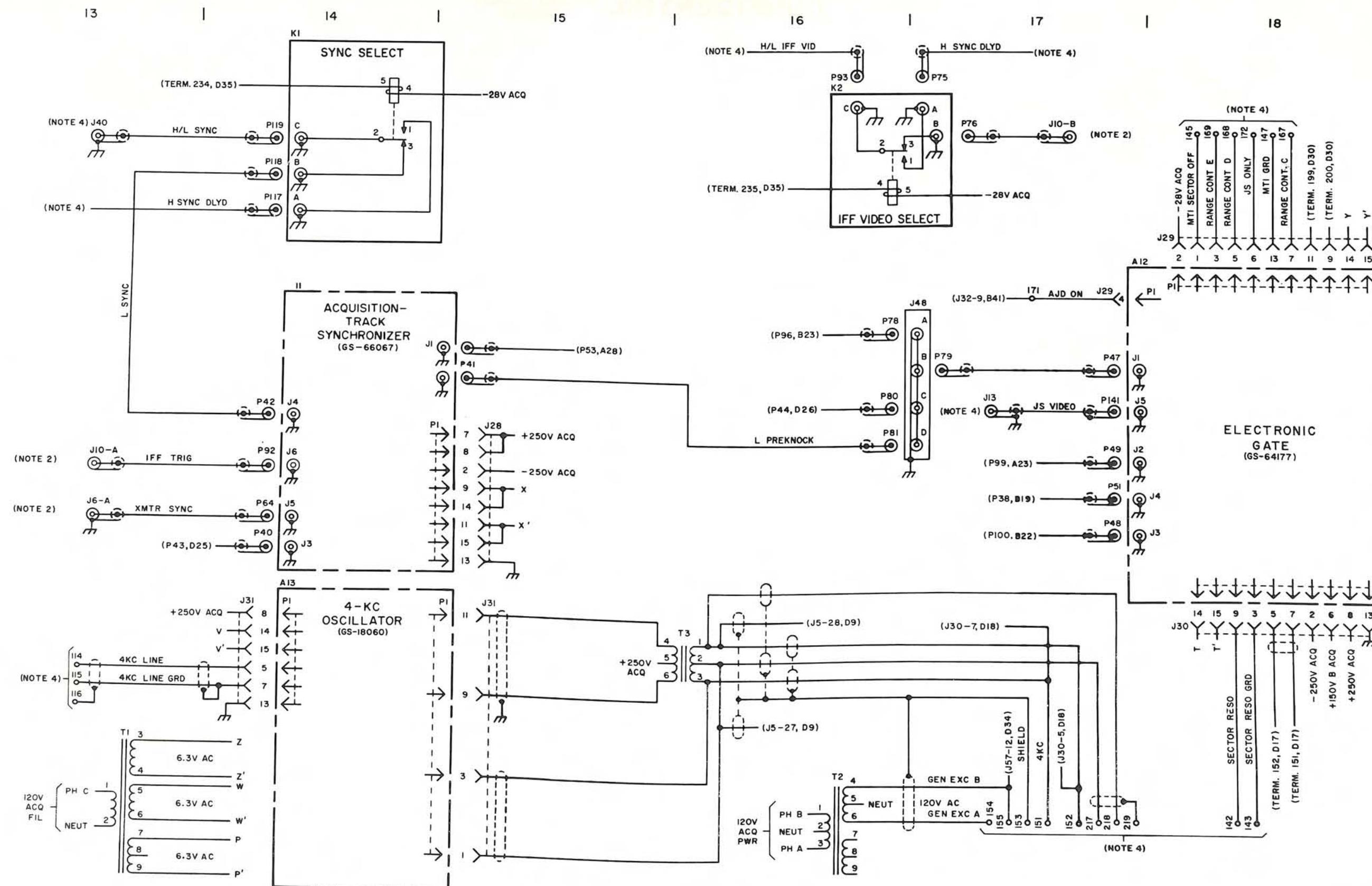


Figure 86 (U). Continued (sheet 3 of 8).

CONFIDENTIAL

ORD G252221

19

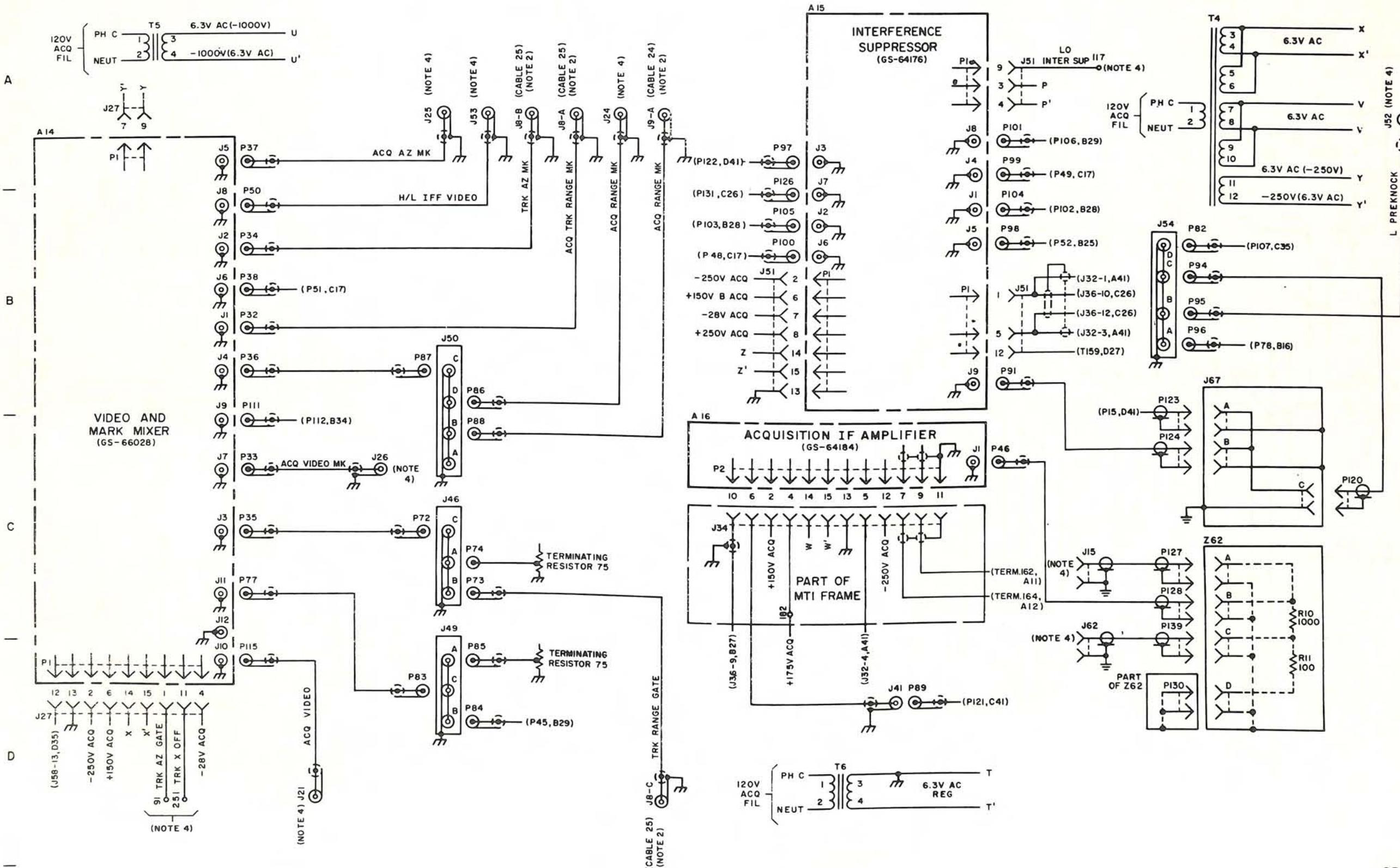
20

21

22

23

24



■ Figure 86 (U). Continued (sheet 4 of 8).

CONFIDENTIAL

25

26

27

28

29

30

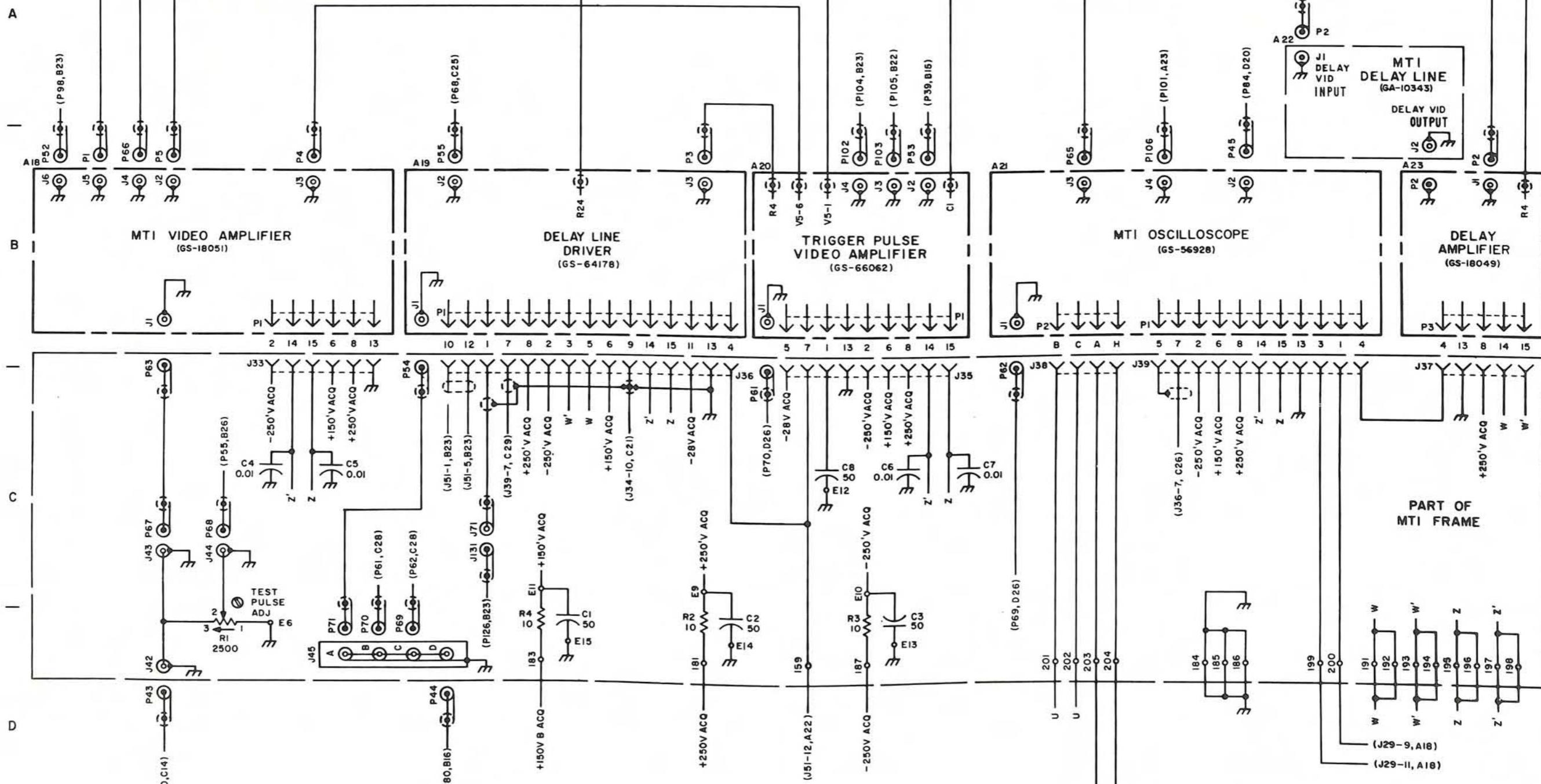


Figure 86 (U). Continued (sheet 5 of 8).

CONFIDENTIAL

31

32

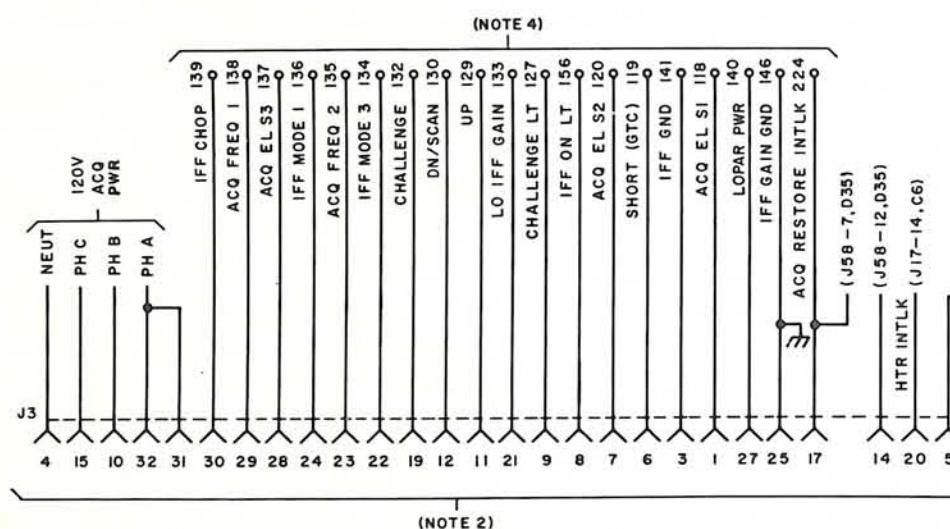
33

34

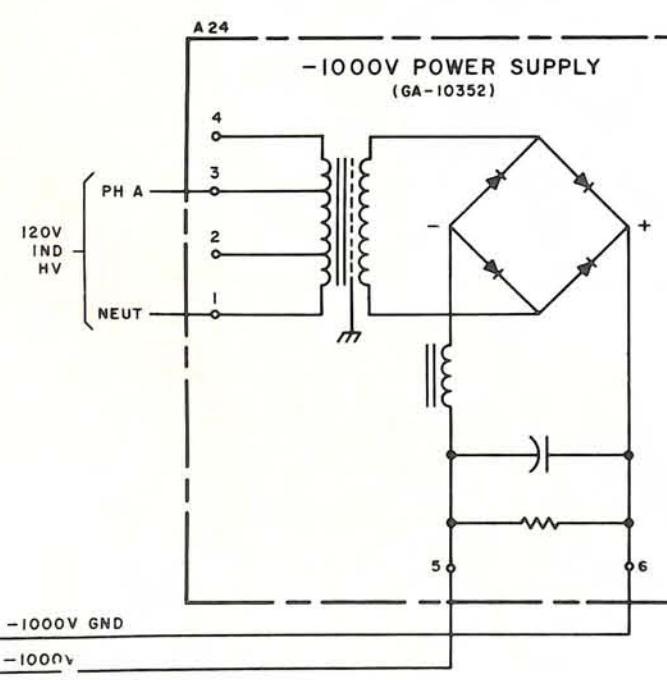
35

36

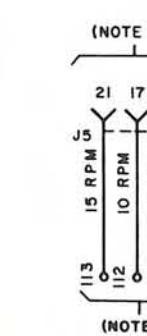
A



B



C



D

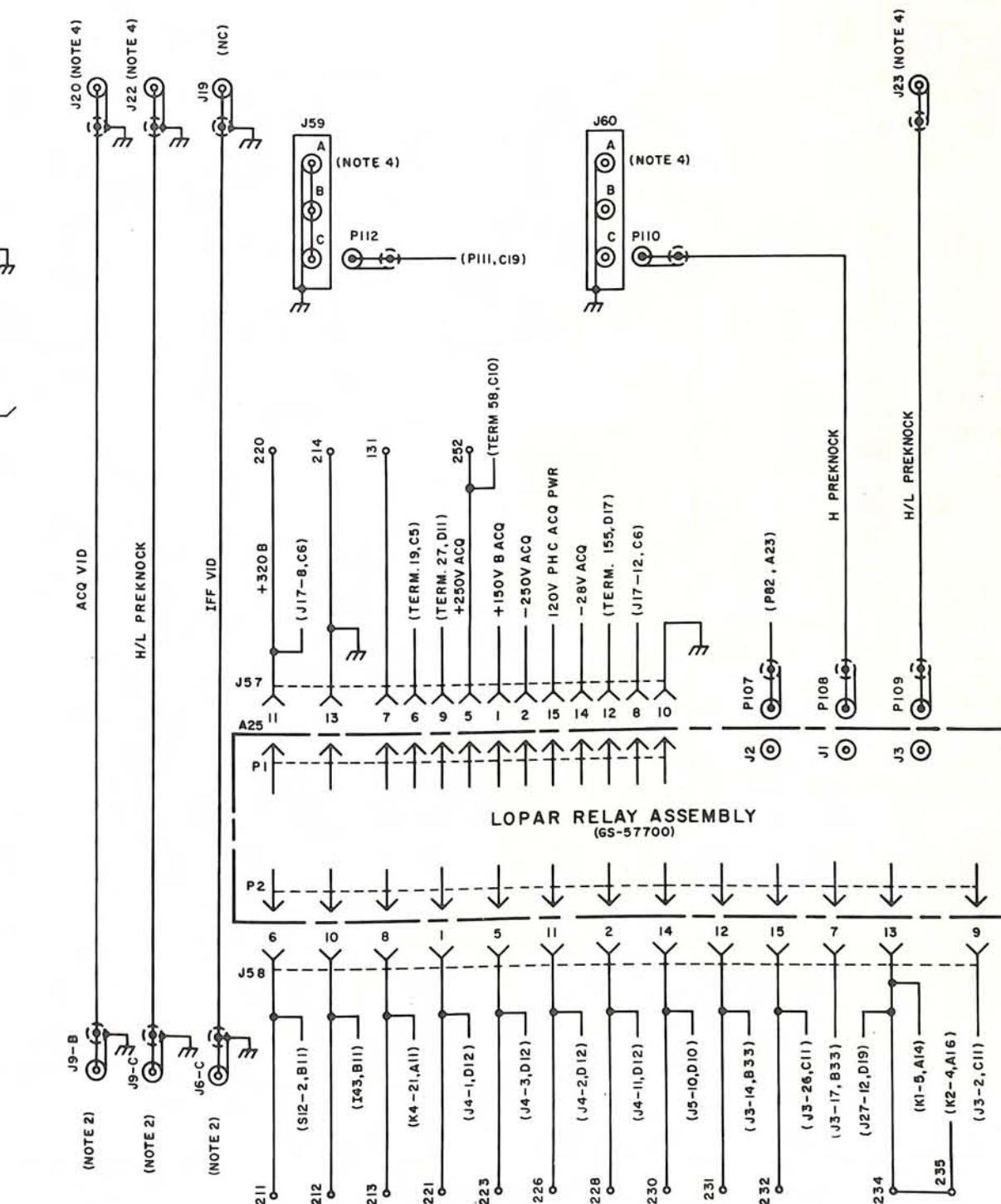


Figure 86 (U). Continued (sheet 6 of 8).

CONFIDENTIAL

ORD G252224

37

38

39

40

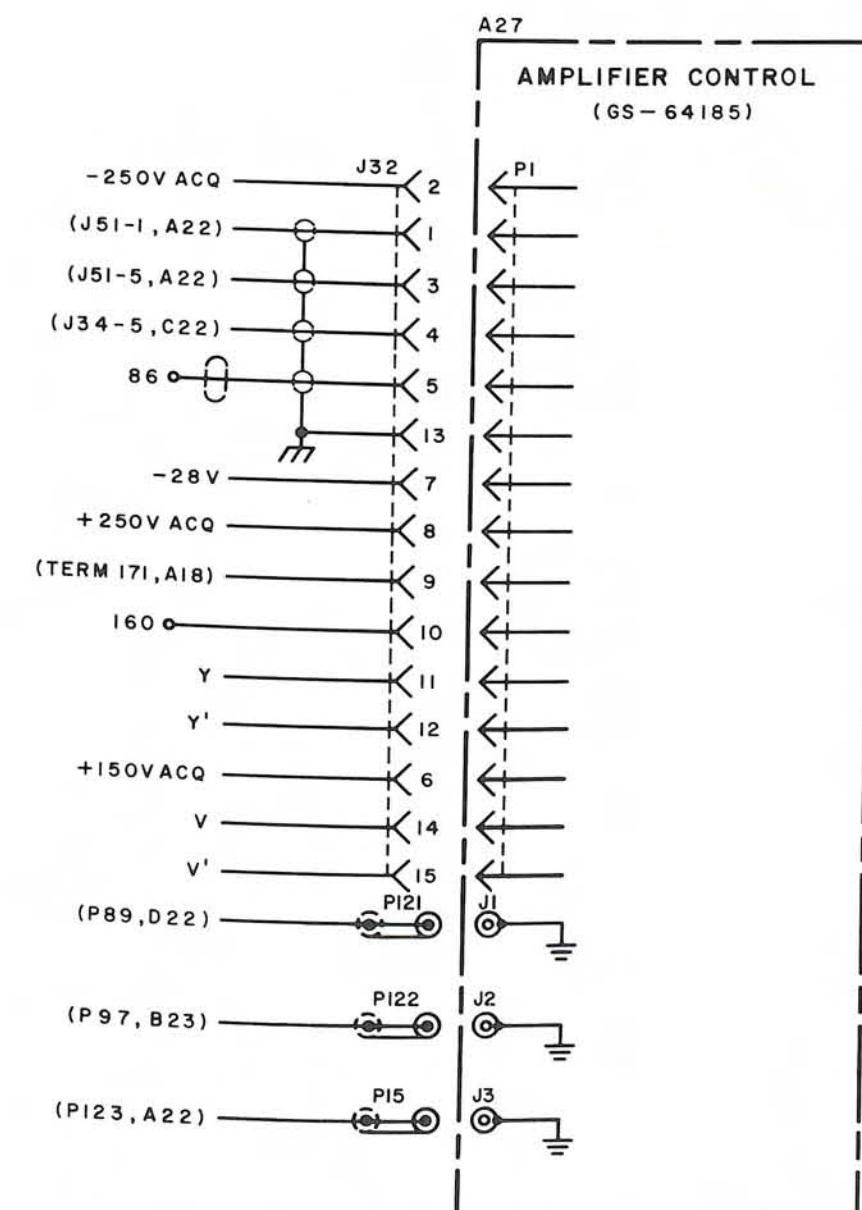
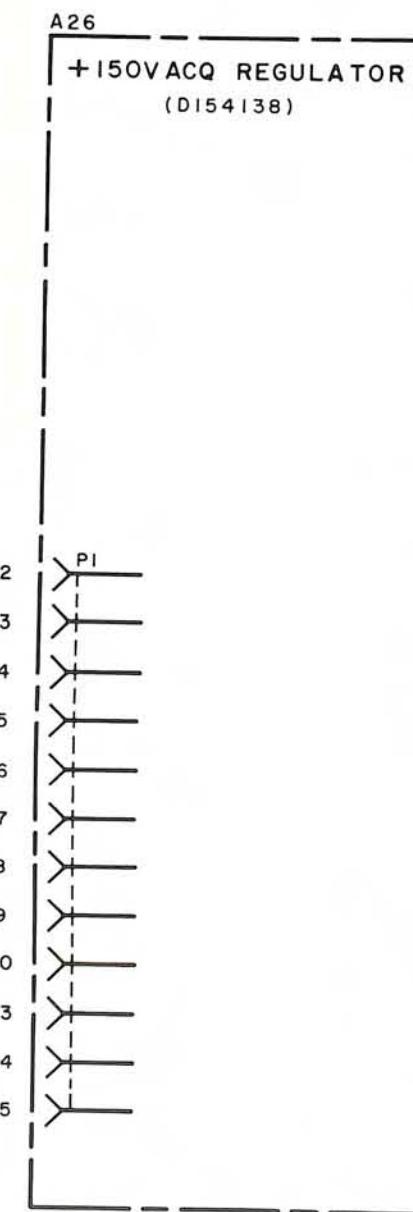
42

A

B

C

D



41

NOTES:

1. ALL VALUES ARE EXPRESSED IN OHMS OR MICRO-FARADS UNLESS OTHERWISE INDICATED
2. REFER TO TM9-1430-254-20/2
3. UNUSED FACILITIES NOT SHOWN IN BODY OF SCHEMATIC ARE AS FOLLOWS:
J1-15,17,19,20,21,22,23,24,26
J2-15,17,19,20,21,22,23,24,26
J3-16,18,37
J4-18
J5-22,24,26
J11-4,7,9,11
J12-1,5,7,9,11,12
J14
J17-4
J18-4,5,7,8,9,11,14,15
J27-3,5,8,10
J28-1,5,6,10,12
J29-8,10,12
J30-1,4,10,11,12
J31-2,4,6,10,12
J32-8
J33-1,3,4,5,7,9,10,11,12
J34-1,3,5,7,8,9,11,12
J35-3,4,9,10,11,12
J37-1,2,3,5,6,9,10
J38-D,E,F
J39-9,10,11,12
J51-10,11
J52
J55-16
J57-3,4
J58-3,4
J66-1,11,12
J70-6,11
P56-B,J,K,L,M,T,U
P57-E,F,N
P58-A,B,D,F,H,K,L,M,P,R,U,V
P59-E,F,N
P60-B,C,D,H,J,K,L,P,R,U,V
4. REFER TO SCHEMATIC OF TRAILER MOUNTED DIRECTOR STATION (GS-6747I)9993057.
5. RESISTORS ASSOCIATED WITH NEON INDICATORS ARE 0.1 MEG AND ARE INTEGRAL PARTS OF LAMP SOCKETS A8328095
6. FUSES DESIGNATED "S" MUST BE OF SLO-BLO TYPE

ORD G252225

707-212 O-63-13

Figure 86 (U). Continued (sheet 7 of 8).

CONFIDENTIAL

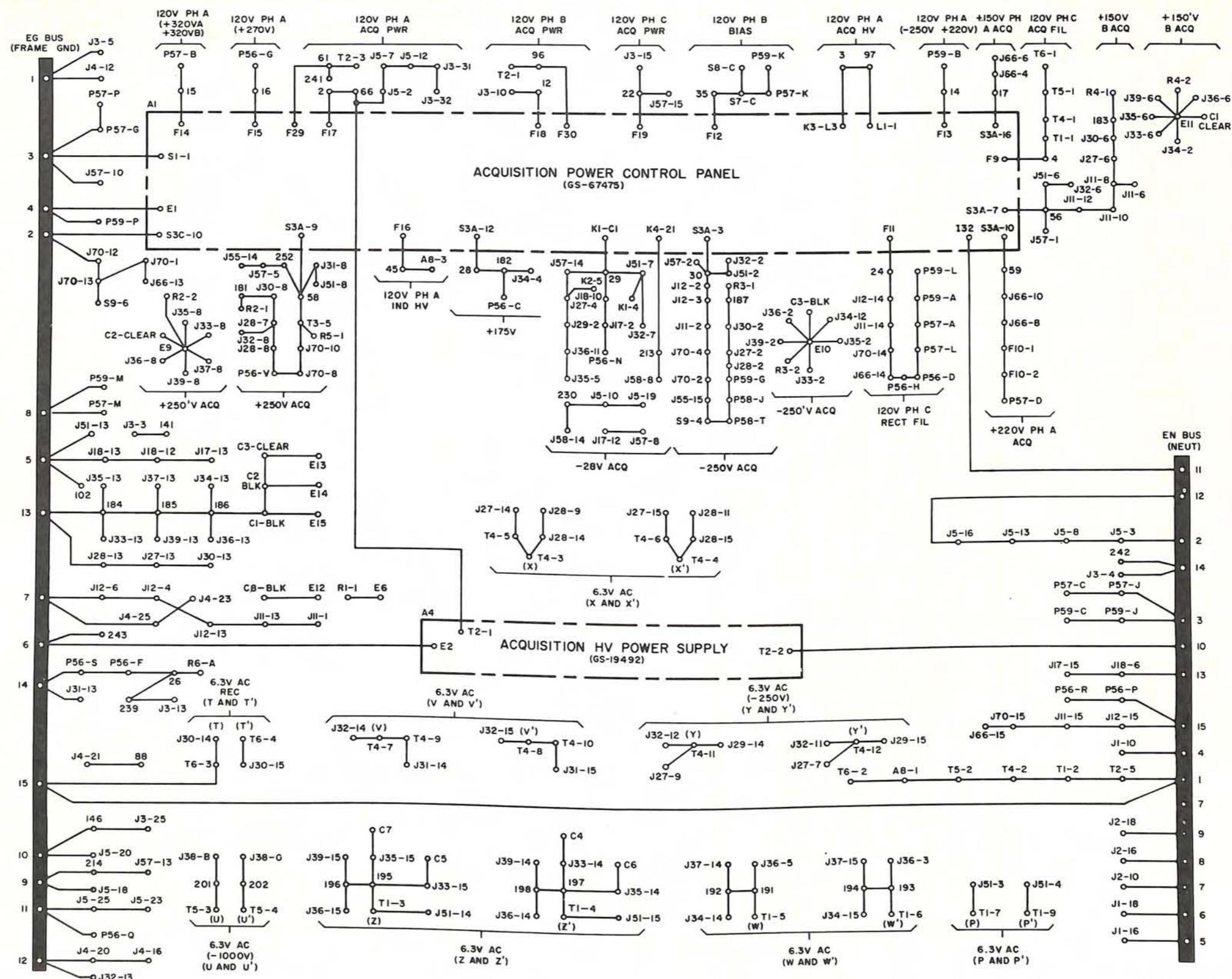


Figure 86 (II) Continued (sheet 8 of 8)

CONFIDENTIAL

(U) INDEX OF TERMINALS—DIRECTOR STATION GROUP

TERMINAL	LOCATION										
1	C10	55	A10	109	C11	163	C22	217	D17	1181	NC
2	B4	56	B10	110	C11	164	A12	218	D17	1182	NC
3	C5	57	A10	111	D33	165	NC	219	D17	1183	NC
4	B4	58	C10	112	D33	166	B12	220	B34	1184	NC
5	D5	59	B10	113	D33	167	A18	221	D34		
6	NC	60	B10	114	C13	168	A18	222	NC		
7	A3	61	A3	115	D13	169	A18	223	D34		
8	C5	62	A6	116	D13	170	NC	324	A33		
9	C5	63	A6	117	A23	171	B17	225	NC		
10	C11	64	A6	118	A32	172	A18	226	D34		
11	C10	65	A5	119	A32	173	A12	227	NC		
12	A4	66	B4	120	A32	174	NC	228	D34		
13	C5	67	A12	121	D12	175	A12	229	NC		
14	B4	68	D3	122	D11	176	B12	230	D35		
15	B4	69	D3	123	D11	177	A12	231	D35		
16	A4	70	D4	124	D11	178	C11	232	D35		
17	B10	71	D3	125	D11	179	C11	233	NC		
18	C5	72	D3	126	NC	180	C11	234	D35		
19	C5	73	D3	127	A32	181	D27	235	D35		
20	A3	74	NC	128	B12	182	C22	236	NC		
21	C10	75	D3	129	A32	183	D27	237	NC		
22	B4	76	D3	130	A32	184	D29	238	D11		
23	C5	77	D3	131	B34	185	D29	239	D11		
24	B4	78	D3	132	A32	186	D29	240	D11		
25	D11	79	A5	133	A32	187	D28	241	A3		
26	D11	80	D5	134	A32	188	NC	242	A6		
27	D11	81	B12	135	A32	189	NC	243	A6		
28	B10	82	NC	136	A31	190	NC	244	NC		
29	B10	83	NC	137	A31	191	D30	245	NC		
30	A10	84	NC	138	A31	192	D30	246	NC		
31	D4	85	NC	139	A31	193	D30	247	NC		
32	D4	86	NC	140	A32	194	D30	248	NC		
33	A6	87	A11	141	A32	195	D30	249	NC		
34	A6	88	A12	142	D18	196	D30	250	NC		
35	B4	89	A11	143	D18	197	D30	251	D19		
36	C10	90	A12	144	NC	198	D30	252	B34		
37	D4	91	D19	145	A18	199	D30	253	NC		
38	C11	92	NC	146	A32	200	D30	254	NC		
39	D5	93	NC	147	A18	201	D29	255	NC		
40	C5	94	D6	148	C1	202	D29	256	NC		
41	D4	95	A6	149	C1	203	D29	257	NC		
42	D4	96	A4	150	C1	204	D29	258	NC		
43	A12	97	C5	151	D17	205	NC	259	NC		
44	A5	98	D5	152	D17	206	NC	260	A6		
45	B4	99	D5	153	D17	207	NC	261	C12		
46	D4	100	D5	154	D17	208	NC	262	C12		
47	D5	101	D6	155	D17	209	NC	263	C12		
48	A12	102	A11	156	A32	210	NC	264	C12		
49	NC	103	A12	157	NC	211	D34	265	C12		
50	B5	104	A12	158	NC	212	D34	266	C12		
51	D4	105	NC	159	D28	213	D34	267	NC		
52	D5	106	A11	160	NC	214	B34	268	NC		
53	D4	107	A11	161	A12	215	D5	269	NC		
54	D4	108	A11	162	C22	216	A6	270	NC		

CONFIDENTIAL

CONFIDENTIAL

Modified Handling Authorized

(U) Director Station Group 9995968—Apparatus List

(U) Director Station Group 9995968—Apparatus List—Continued

Ref desig	Value	Mfr's rating			Type, part, or drawing no.	Remarks
		Tol ±%	Watts	Volts		
A1					9995971	GS-67475
A2					7620519	D-153948
A3					9986425	GS-59744
A4					9139109	GS-57430
A5					9140697	GS-17747
A6					7620552	D-154138
A7					9140697	GS-17747
A8, A9					9137641	GS-57290
A10					9986425	GS-18046
A11					9989392	GS-66067
A12					9990560	GS-64177
A13					8512062	GS-18060
A14					9989191	GS-66028
A15					9990600	GS-64176
A16					9990755	GS-64184
A17					8513754	
A18					8513331	GS-18051
A19					9990570	GS-64178
A20					9989353	GS-66062
A21					9137928	GS-56928
A22					8519066	GA-10343
A23					9007731	GS-18049
A24					8519068	GS-10352
A25					9143901	GS-57700
A26					7620552	D-154138
A27					9990768	GS-64185
C1 thru C3	50	+50 -10	400		CE41C5000	
C4 thru C7	0.01	10	400		CP10A3EE103K	
C8	50	+50 -10	400		CE41C500Q	
DS1, DS10				1/25	7605718	
EA thru EC					8009011	
EG, EN					8159258	
E6					8516062	
E9 thru E11					8175658	
E12 thru E15					8175334	
F1, F10	1 amp				MS90082-1	
J1, J2					7632526	
J3					7632529	
J4, J5					7632527	
J6					7606490	
J7					9000848	
J8 thru J10					7606490	
J11, J12					7599367	
J13					7599662	
J14					9007754	
J15					7599662	
J17, J18					7599367	
J19 thru J26					7599662	
J27 thru J31					7599367	
J32					9150422	
J33 thru J37					7599367	
J38					8519237	
J39					7599367	
J40					7599662	
J41 thru J44					MS27035-625B	
J45					9003874	
J46					8519232	
J48					9003874	
J49					8519232	

Ref desig	Value	Mfr's rating			Type, part, or drawing no.	Remarks
		Tol ±%	Watts	Volts		
J50						9003874
J51						7599367
J52, J53						7599662
J54						9003874
J55						7583665
J56						8175215
J57, J58						7599367
J59, J60						8519232
J66						9150422
J67						8510232
J70						9150422
J71						MS27035-625B
K1, K2						9976399
P15						9144413
P32 thru P55						9144413
P56						9003507
P57						9003506
P58						9003507
P59						9003506
P60						7611377
P61 thru P73						9144413
P74						7601757
P76 thru P84						9144413
P85						7601757
P86 thru P89						9144413
P91, P92						9144413
P94 thru P112						9144413
P115						9144413
P118 thru P124						9144413
P126 thru P128						9144413
P130						8024493
P131						9144413
P141						9144413
R1	2500		10	2		8175592
R2 thru R4	10		5	2		MS35045-39
R5	310		5	18		RW33G311
R6	2800		5	37		RW22G282
S4 thru S6						7602749
S7						8017760
S8						7602749
S9						9001495
T1						7605345
T2						8011006
T3						7605549
T4						8516337
T5						8519067
T6						8015382
TB100						7634156
TB101 thru TB124						7634159
Z62						9008115

Part of Z62

CONFIDENTIAL

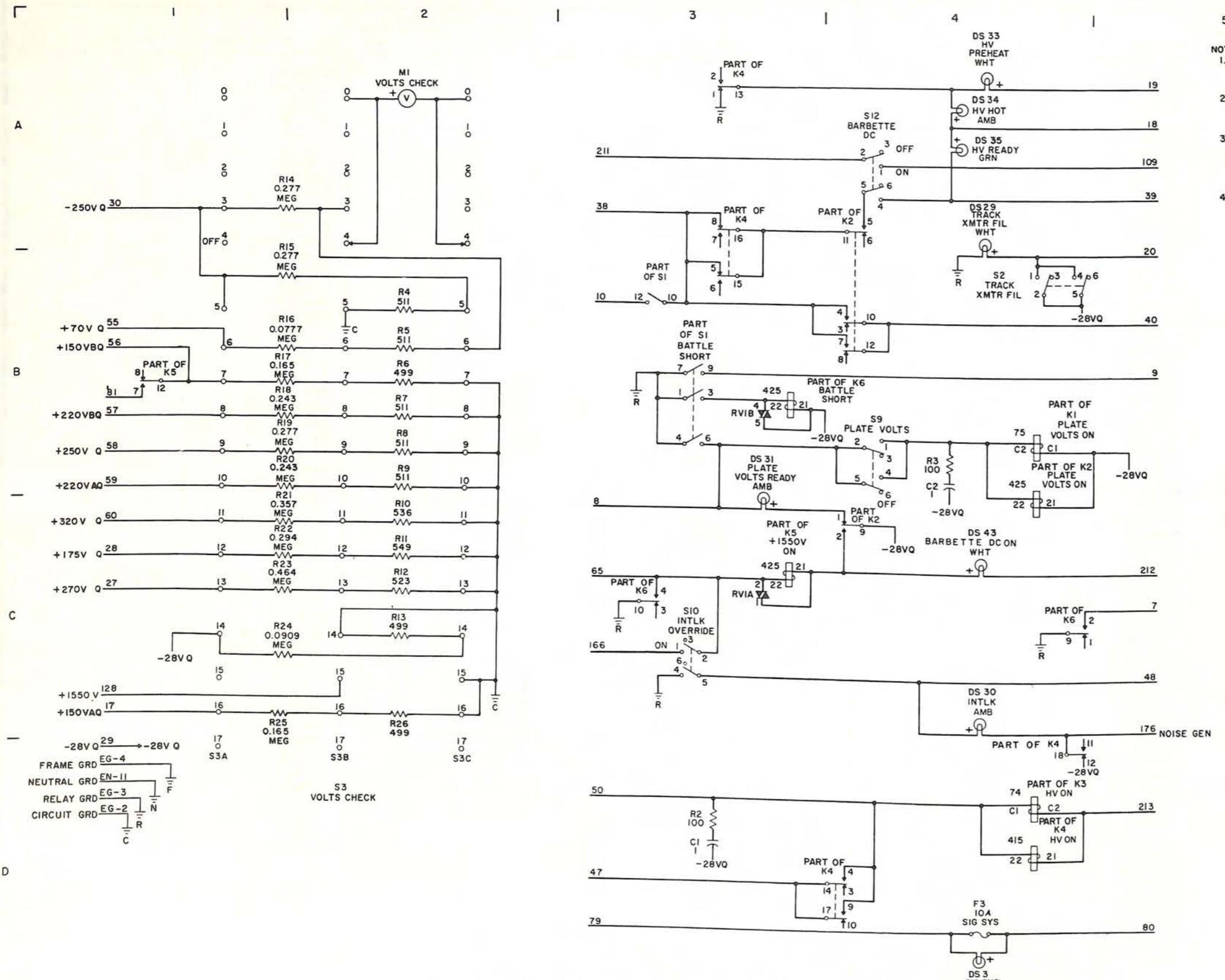
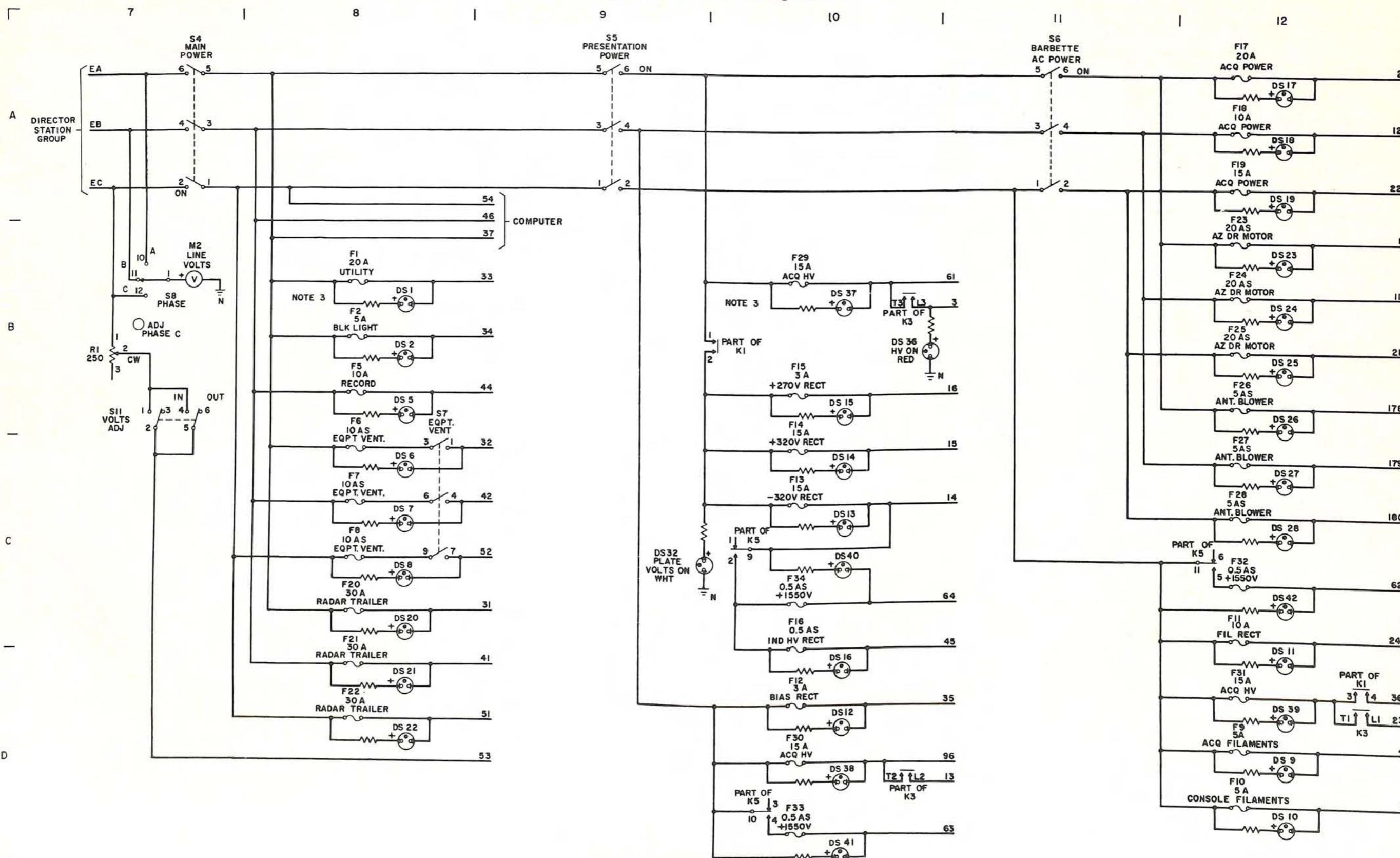


Figure 88 (U). Acquisition power control panel 9995971—schematic diagram (sheet 1 of 2) (U).

CONFIDENTIAL

ORD G252282



CONFIDENTIAL

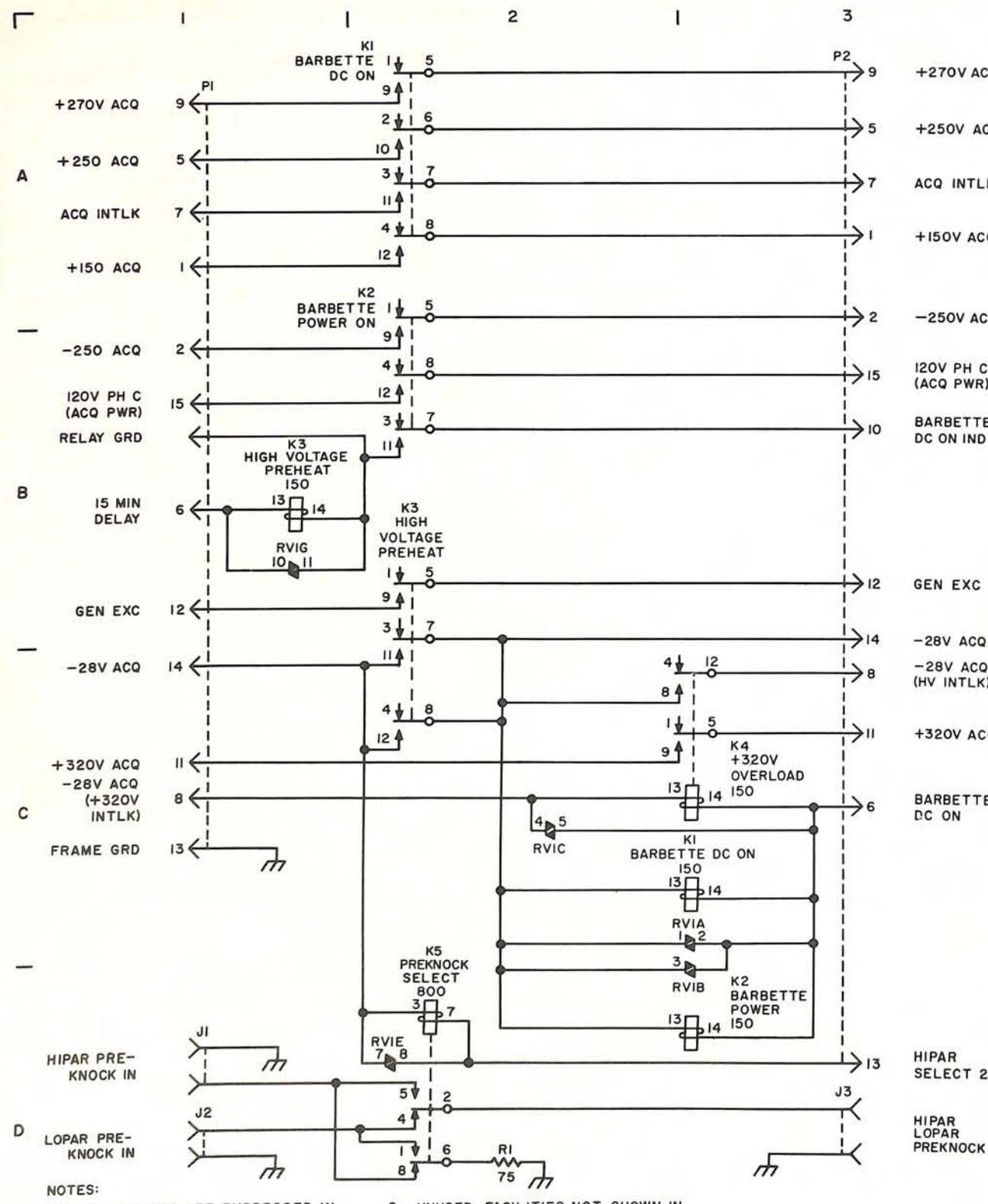
Modified Handling Authorized

(U) Acquisition Power Control Panel 9995971—Apparatus List

Ref desig	Value	Mfr's rating			Type, part, or drawing no.	Remarks
		Tol ±%	Watts	Volts		
C1, C2	1.0	10	600	7631713	CP69B1EF105K	
I1, I2			1/25	125	7605718	BA-10007-6
I3				28	MS25231-1819	BA-10010-11
I5 thru I28			1/25	125	7605718	BA-10007-6 (24 required)
I29 thru I31				28	MS25231-1819	BA-10010-11
I32			1/25	125	7605718	BA-10007-6
I33 thru I35				28	MS25231-1819	BA-10010-11
I36 thru I42			1/25	125	7605718	BA-10007-6 (7 required)
I43				28	MS25231-1819	BA-10010-11
F1	20			125	8175384	BA-10082-148
F2	5			250	MS90082-4	F06G5R00A
F3, F5	10			250	MS90082-5	F06G10R0A
F6 thru F8	10			32	MS90081-8	F05A10R0B
F9, F10	5			250	MS90082-4	F06G5R00A
F11	10			250	MS90082-5	F06G10R0A
F12	3			250	MS90082-3	F06G3R00A
F13, F14	15			250	MS90082-6	F06G15R0A
F15	3			250	MS90082-3	F06G3R00A
F16	0.5			250	8175351	
F17	20			125	8175384	BA-10082-148
F18	10			250	MS90082-5	F06G10R0A
F19	15			250	MS90082-6	F06G15R0A
F20 thru F22	30			250	MS90088-14	F15G30R0A
F23 thru F25	20			32	MS90081-10	F05A20R0B
F26 thru F28	5			32	MS90080-5	F04A5R00B
F29 thru F31	15			250	MS90082-6	F06G15R0A
F32 thru F34	0.5			250	8175351	
K1	75			28	7608169	GA-30003L1
K2	425			28	9009252	G-243879-1
K3	74			28	8010156	GA-51038L1
K4	415			28	8175082	BA-98259
K5, K6	425			28	9009252	G-243879-1
M1					8019154	GA-52545
M2					8011120	GA-51138
R1	250	10	50		8177342	RP151RD251KK
R2, R3	100	10	2		MS35045-7	RC42GF101K
R4, R5	511	1	1		8513991	D-176176A
R6	499	1	1		8516324	D-176176A
R7 thru R9	511	1	1		8513991	D-176176A
R10	536	1	1		8515690	D-176176A
R11	549	1	1		8516326	D-176176A
R12	523	1	1		8515689	D-176176A
R13	499	1	1		8516324	D-176176A
R14, R15	0.277 meg	1	1		7599475	D-176176A
R16	0.0777 meg	1	1		8515688	D-176176A
R17	0.165 meg	1	1		8017799	D-176176A
R18	0.243 meg	1	1		8017994	D-176176A
R19	0.277 meg	1	1		7599475	D-176176A
R20	0.243 meg	1	1		8017994	D-176176A
R21	0.357 meg	1	1		8516322	D-176176A
R22	0.294 meg	1	1		8017788	D-176176A
R23	0.464 meg	1	1		8516344	D-176176A
R24	0.0909 meg	1	1		8023282	D-176176A
R25	0.165 meg	1	1		8017799	D-176176A
R26	499	1	1		8516324	D-176176A
RV1					7599075	D-176692
S1					7602621	BA-98051

Ref desig	Value	Mfr's rating			Type, part, or drawing no.	Remarks
		Tol ±%	Watts	Volts		
S2					9001495	G-243485-4
S3					8016523	GA-51035L1
S4, S5					8011078	GA-51037L1
S6					8011077	GA-51036
S7					7599795	BA-98050
S8					7614973	BO-710841
S9					9001495	G-243485-4
S10					9000774	G-243486-17
S11, S12					9001495	G-243485-4

CONFIDENTIAL



- NOTES:
1. ALL VALUES ARE EXPRESSED IN OHMS UNLESS OTHERWISE INDICATED
 2. UNUSED FACILITIES NOT SHOWN IN BODY OF SCHEMATIC ARE AS FOLLOWS:
K2-2,6,10 PI-3,4
K3-2,6,10 P2-3,4
K4-2,6,10,3,7,11 RVI-6,9

G82102 ■

Figure 89 (U). LOPAR relay assembly 9143901—schematic diagram. (U).

(U). LOPAR Relay Assembly 9143901—Apparatus List

Reference designation	Ordnance part No.	Part description
J1, J2, . . . J3	8531071	CONNECTOR, RECEPTACLE, ELECTRICAL: stght, 1 female cont
K1, K2, . . . K3, K4	9007313	RELAY ARMATURE: 4 pdt, cont 110v ac or 26v dc, 5 amp, coil 26v dc, 150 ohm
K5	8631722	RELAY, ARMATURE: 5 amp, 26v dc or 110v ac, 800 ohm
P1, P2 . . .	9150421	CONNECTOR, RECEPTACLE, ELECTRICAL: rect, 15 male cont
R1	MS35043-60	RESISTOR, FIXED, COMPOSITION: 1/2w, 75 ohm ±5%, type RC20GF750J
RV1	7599075	RESISTOR, VOLTAGE SENSITIVE: 21v dc min, 32v dc max reqd to pass 5 ma

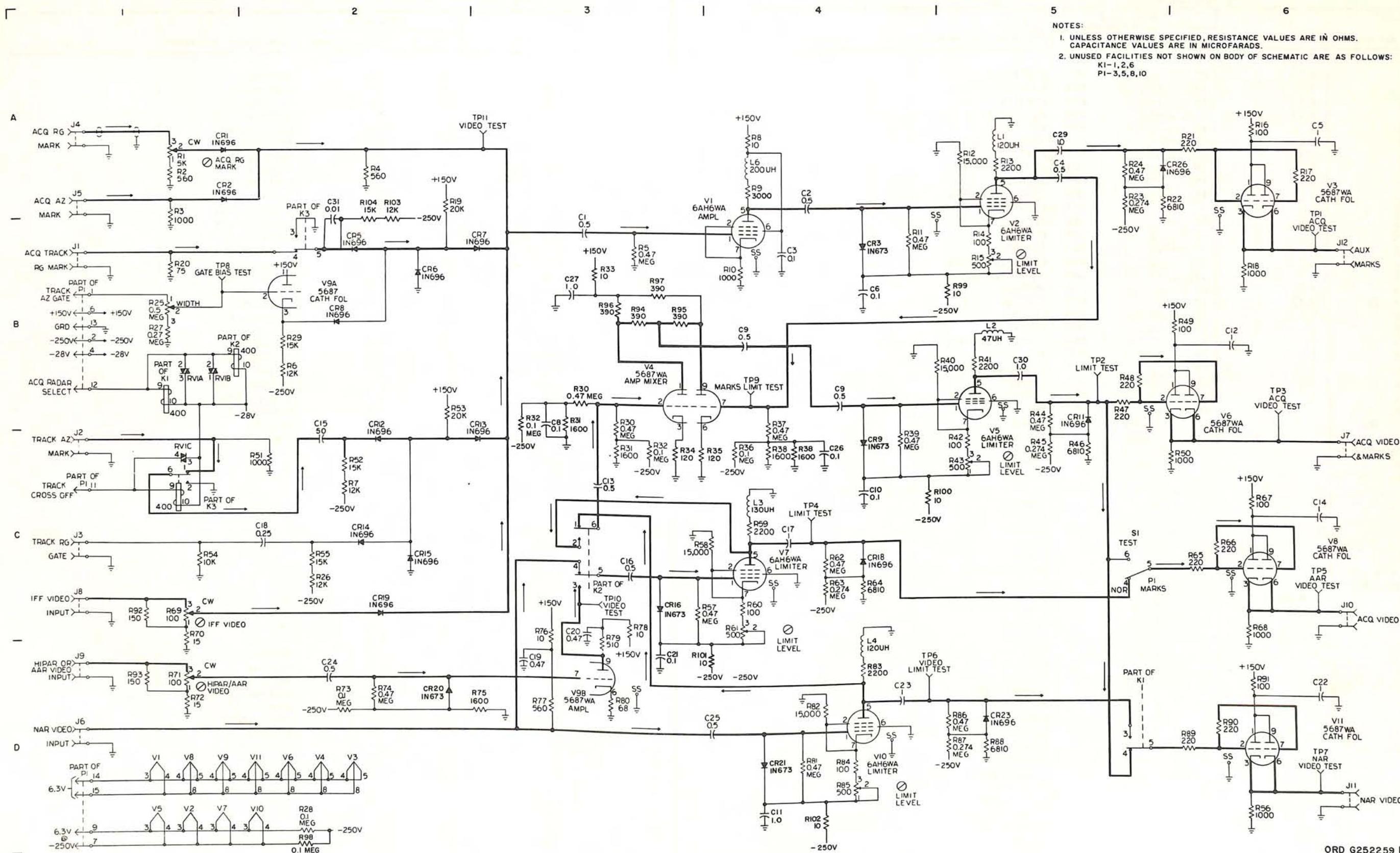


Figure 92 (U). Video and mark mixer 9989191—schematic diagram (U).

CONFIDENTIAL

CONFIDENTIAL - Modified Handling Authorized

(U) Video and Mark Mixer 9989191—Apparatus List

(U) Video and Mark Mixer 9989191—Apparatus List—Continued

Ref desig	Value	Mfr's rating			Type, part, or drawing no.	Remarks
		Tol ±%	Watts	Volts		
C1	0.5	20	200	9158151-1		
C2	0.5	10	600	CP69B1EF504K1		
C3	0.1	10	600	9144116		
C4	0.5		200	9158151-1		
C5	1	10	400	8515939		
C6	0.1	10	600	9144116		
C8	0.1	10	600	9144116		
C9	0.5	10	600	CP69B1EF504K1		
C10	0.1	10	600	9144116		
C11	1	10	600	CP69B1EF105K1		
C12	1	10	400	8515939		
C13	0.5	20	200	9158151-1		
C14	1	10	400	8515939		
C15	50	+20 -10	60	8007692		
C16	0.5	10	600	CP69B1EF504K1		
C17	1	10	600	CP69B1EF105K1		
C18	0.25	20	350	9003937		
C19,C20	0.47	20	400	8175944		
C21	0.1	10	600	9144116		
C22	1	10	400	8515939		
C23	1	10	600	CP69B1EF105K1		
C24	0.5	20	200	9158151-1		
C25	0.5	10	600	CP69B1EF504K1		
C26	0.1	10	600	9144116		
C27	1	10	600	CP69B1EF105K1		
C29,C30	1	20	200	9002781		
CR1,CR2				1N696		
CR3				9016939		
CR5 thru CR8				1N696		
CR9				9016939		
CR11 thru CR14				1N696		
CR15				9016939		
CR16				1N696		
CR18,CR19				9016939		
CR20,CR21				1N696		
CR23				1N696		
CR26				1N696		
J1 thru J12				MS27035-625B		
K1 thru K3	400			9011925		
L1	120 μ h			9024735		
L2	47 μ h			8520587		
L3	130 μ h			9139026		
L4	120 μ h			9024735		
L6	200 μ h			9156840-12		
P1				9980454		
R1	5000	10	1/2	9138853		
R2	560	10	1/2	MS35043-202		
R3	1000	10	1/2	MS35043-13		
R4	560	5	1/2	MS35043-81		
R5	0.47 meg	10	1/2	MS35043-29		
R6,R7	12,000	5	2	MS35045-113		
R8	10	10	1/2	MS35043-1		
R9	3000	5	1/2	RC20GF302J		
R10	1000	10	1/2	MS35043-13		
R11	0.47 meg	10	1/2	MS35043-29		
R12	15,000	5	2	MS35045-115		
R13	2200	5	2	RC42GF222J		
R14	100	10	1/2	MS35043-7		
R15	500	10	1/2	9722385		

Ref desig	Value	Mfr's rating			Type, part, or drawing no.	Remarks
		Tol ±%	Watts	Volts		
R16	100		10	1/2		MS35043-7
R17	220		10	1/2		MS35043-9
R18	1000		10	1/2		MS35043-13
R19	20,000		5	2		MS35045-118
R20	75		5	1/2		MS35043-60
R21	220		10	1/2		MS35043-9
R22	6810		1	1/2		9010171
R23	0.27 meg		1	1/2		8626918
R24	0.47 meg		10	1/2		MS35043-29
R25	0.5 meg		10	1/2		9144158
R26	12,000		5	2		MS35045-113
R27	0.27 meg		5	1/2		MS35043-145
R28	0.1 meg		10	1/2		MS35043-25
R29	15,000		5	2		MS35045-115
R30	0.47 meg		10	1/2		MS35043-29
R31	1600		5	1/2		MS35043-92
R32	0.1 meg		5	2		MS35045-135
R33	10		10	1/2		MS35043-1
R34,R35	120		5	1/2		MS35043-65
R36	0.1 meg		5	2		MS35045-135
R37	0.47 meg		10	1/2		MS35043-29
R38	1600		5	1/2		MS35043-92
R39	0.47 meg		10	1/2		MS35043-29
R40	15,000		5	2		MS35045-115
R41	2200		5	2		RC42GF222J
R42	100		10	1/2		MS35043-7
R43	500		10	1/2		9722385
R44	0.47 meg		10	1/2		MS35043-29
R45	0.274 meg		1	1/2		8626918
R46	6810		1	1/2		9010171
R47,R48	220		10	1/2		MS35043-9
R49	100		10	1/2		MS35043-7
R50,R51	1000		10	1/2		MS35043-13
R52	15,000		5	2		MS35045-115
R53	20,000		5	2		MS35045-118
R54	1000		5	1/2		MS35043-111
R55	15,000		5	2		MS35045-115
R56	1000		10	1/2		MS35043-13
R57	0.47 meg		10	1/2		MS35043-29
R58	15,000		5	2		MS35045-115
R59	2200		5	2		RC42GF222J
R60	100		10	1/2		MS35043-7
R61	500		10	1/2		9722385
R62	0.47 meg		10	1/2		MS35043-29
R63	0.274 meg		1	1/2		8626918
R64	6810		1	1/2		9010171
R65,R66	220		10	1/2		MS35043-9
R67	100		10	1/2		MS35043-7
R68	1000		10	1/2		MS35043-13
R69	100		10	1/2		9144109
R70	15		5	1/2		MS35043-43
R71	100		10	1/2		9144109
R72	15		5	1/2		MS35043-43
R73	0.1 meg		5	1		MS90194-97
R74	0.47 meg		10	1/2		MS35043-29
R75	1600		5	1/2		MS35043-92
R76	10		10	1/2		MS35043-1
R77	560		10	1/2		MS35043-202

(U) Video and Mark Mixer 9989191—Apparatus List—Continued

Ref desig	Value	Mfr's rating			Type, part, or drawing no.	Remarks
		Tol ±%	Watts	Volts		
R78	10	10	1/2		MS35043-1	
R79	510	5	1/2		MS35043-80	
R80	68	5	1/2		MS35043-59	
R81	0.47 meg	10	1/2		MS35043-29	
R82	15,000	5	2		MS35045-115	
R83	2200	5	2		RC42GF222J	
R84	100	10	1/2		MS35043-7	
R85	500	10	1/2		9722385	
R86	0.47 meg	10	1/2		MS35043-29	
R87	0.274 meg	1	1/2		8626918	
R88	6810	1	1/2		9010171	
R89,R90	220	10	1/2		MS35043-9	
R91	100	10	1/2		MS35043-7	
R92,R93	150	5	1/2		MS35043-67	
R94 thru R97	390	5	1/2		MS35043-77	
R98	0.1 meg	10	1/2		MS35043-25	
R99 thru R102	10	10	12		MS35043-1	
R103	12,000	5	2		MS35045-113	
R104	15,000	5	2		MS35045-115	
RV1					8515017	
S1					9001495	
TP1 thru TP11					9976477	
V1,V2					7599312	
V3,V4					9024636	
V5					7599312	
V6					9024636	
V7					7599312	
V8,V9					9024636	
V10					7599312	
V11					9024636	

MEASUREMENT NOTES

1. General

a. Measurements are made with all variable resistors adjusted for normal operation and all tubes in sockets.

b. Notation 3 to 4 in the Pin column indicates that measurement is made between pins 3 and 4; notation 4, 5 to 8 indicates that measurement is made between pin 4 and pin 8 or pin 5 and pin 8.

c. All values given are typical.

2. Voltage

a. Measurements are made with system energized through low voltage condition and with cables removed from J1, J2, J3, J4, J5, J6, J9, and J10.

b. Measurements are made with electronic multimeter TS-505/U using the scale that permits reading nearest full scale.

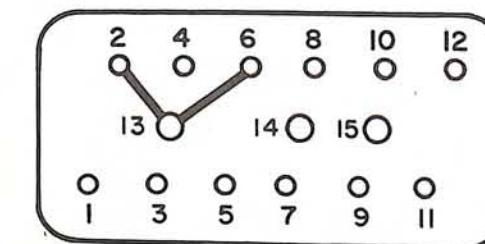
c. Voltages are +dc measured to ground unless otherwise indicated.

3. Resistance

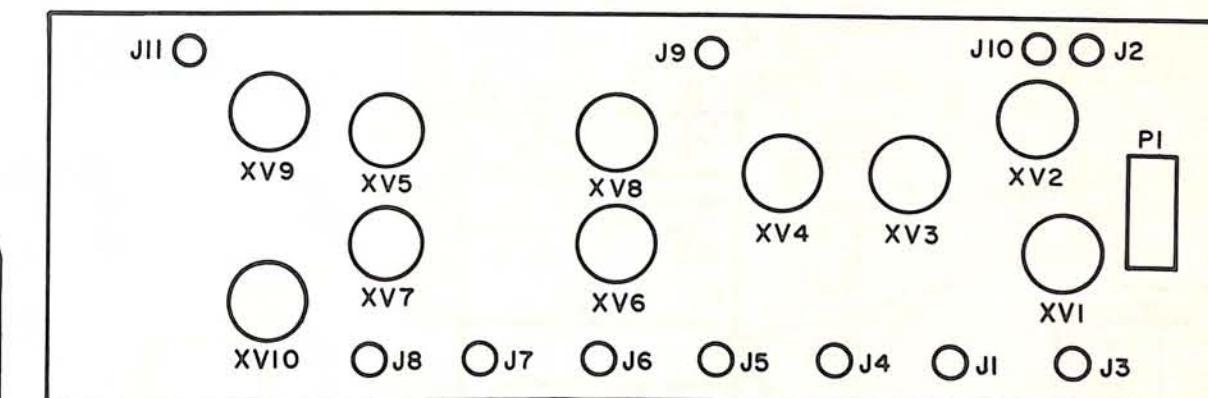
a. Measurements are made with multimeter TS-352/U using the scale that permits reading nearest midscale.

b. Measurements are made with all external cables disconnected and connector P1 strapped as indicated.

c. Resistances are measured to ground unless otherwise indicated.



PIN STRAPPING ARRANGEMENT FOR P1



BOTTOM VIEW OF CHASSIS

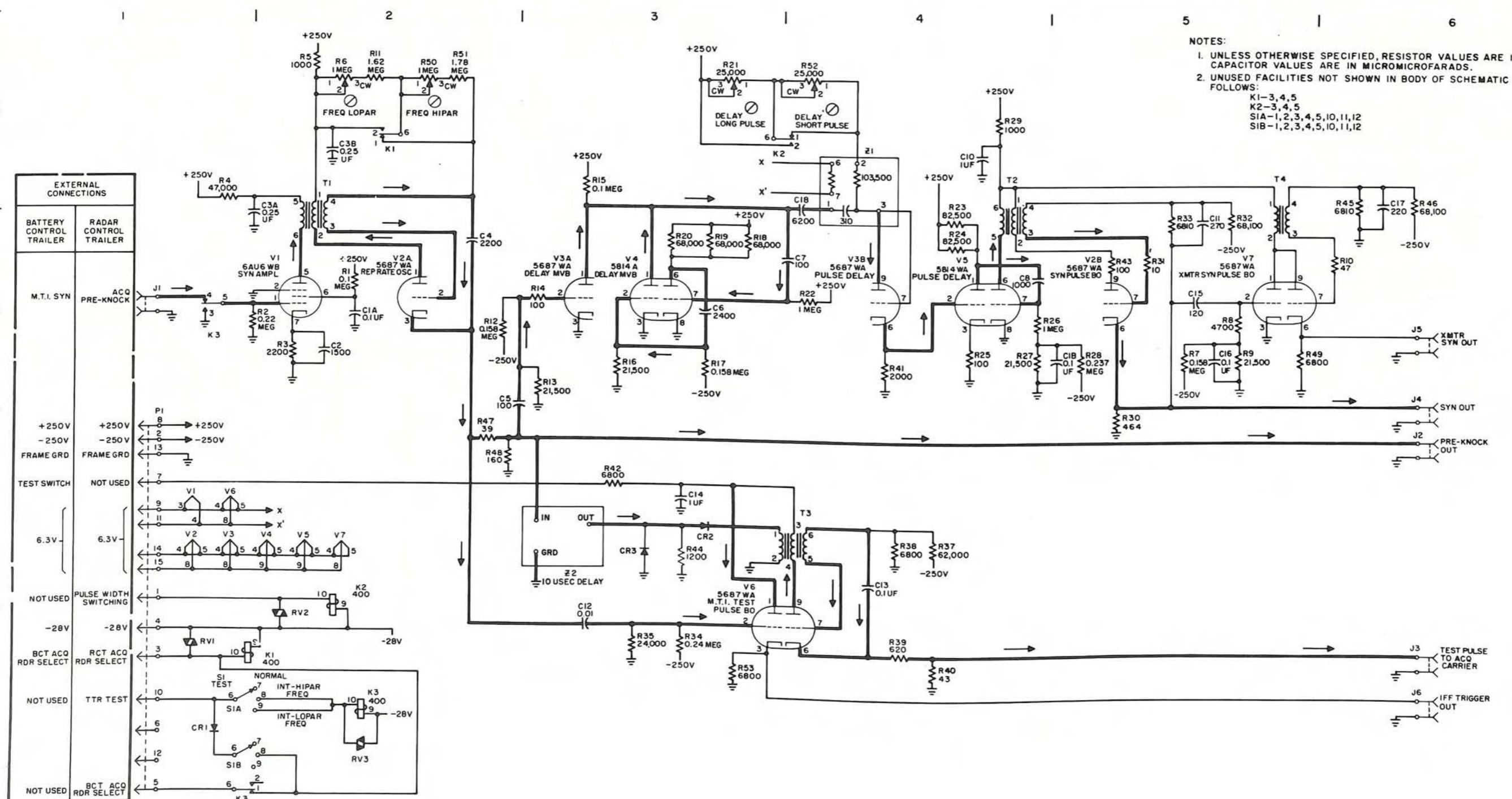
Ref desig		Tube type	Tube function	Plate			Suppressor			Screen			Control			Cathode			Filament		
Socket	Tube			Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms
XV1	V1	5725/6AS6W	Coincidence amplifier	5	150	2,800	7	-5.1	262,000	6	150	100	1	-10	494,000	2	0	0	3 to 4	6.3 ac	< 1
XV2	V2	5725/6AS6W	Coincidence amplifier	5	150	5,600	7	-12.3	484,000	6	150	56	1	-9.5	480,000	2	0	0	3 to 4	6.3 ac	< 1
XV3	V3	6AH6	Clipper	5	136	2,800		Same as cathode		6	150	100	1	-2.5	4,600	2, 7	0	0	3 to 4	6.3 ac	< 1
XV4	V4	6AH6	Marker amplifier	5	150	1,200		Same as cathode		6	150	10	1	-6.2	478,000	2, 7	0	160	3 to 4	6.3 ac	< 1
XV5	V5	6AH6	Video amplifier	5	140	1,900		Same as cathode		6	150	100	1	0	20△	2, 7	3	178	3 to 4	6.3 ac	< 1
XV6	V6	6AH6	Clipper	5	140	1,900		Same as cathode		6	150	10	1	-1.8	200,000	2, 7	0.8	120	3 to 4	6.3 ac	< 1
XV7	V7	5687WA	Cathode follower	1	150	68							2	-6.5	8,000△	3	3	1,000	4, 5 to 8	6.3 ac	< 1
XV8	V8	5687WA	Amplifier mixer	1	150	560							7	-6.5	8,200△	6	3	1,000			
XV9	V9	6AH6	Video amplifier	5	138	1,600		Same as cathode		6	150	100	1	0	20△	2, 7	1.8	178	3 to 4	6.3 ac	< 1
XV10	V10	5687WA	Cathode follower	1	150	68							2	-6.5	8,000△	3	3	1,000	4, 5 to 8	6.3 ac	< 1
				9	150	68							7	-6.5	8,200△	6	3	1,000			

< Less than. △ Reverse meter leads if reading is not obtained.

ORD G28841

Figure 92A (U). Video and mark mixer 9145581—voltage and resistance chart. (U)

CONFIDENTIAL



ORD G252258

Figure 93 (U). Acquisition-track synchronizer 9989392—schematic diagram (U).

(U) Acquisition-Track Synchronizer 9989392—Apparatus List

CONFIDENTIAL

- Modified Handling Authorized

(U) Acquisition-Track Synchronizer 9989392—Apparatus List—Continued

Ref desig	Value	Mfr's rating			Type, part, or drawing no.	Remarks
		Tol ±%	Watts	Volts		
C1A, C1B	0.1 uf	+20 -10		600	CP69B4EF104V1	
C2	1500	10		500	CM30B152JN3	
				600	CP69B4EF254V1	
C3A, C3B	0.25 uf	+20 -10		600	CP69B4EF254V1	
C4	2200	2		500	CM30E222GN3	
C5	100	10		500	CM15B101KN3	
C6	2400	5		500	CM30D242JN3	
C7	100	5		500	CM25E101JN3	
C8	1000	10		500	CM25B102JN3	
C10	1 uf	10		600	CP69B1EF105K1	
C11	270	5		500	CM15B271JN3	
C12	0.01	10		300	CM35B103JN3	
C13	0.1 uf	10		600	CP28A1EF104K1	
C14	1 uf	10		600	CP69B1EF105K1	
C15	120	10		500	CM15B121KN3	
C16	0.1 uf	20		200	8023769	
C17	220	5		500	CM15B221JN3	
C18	6200	2		500	CM35E622GN3	
CR1				9011788	1N1415	
CR2, CR3				9139089	1N672	
J1 thru J6				8531071	UG-625B/U	
K1 thru K3	400			9011925		
P1				7598934		
R1	0.1 meg	10	1/2	MS35043-25	RC20GF104K	
R2	0.22 meg	10	1/2	MS35043-27	RC20GF224K	
R3	2200	10	1/2	MS35043-15	RC20GF222K	
R4	47,000	10	1/2	MS35043-23	RC20GF473J	
R5	1000	10	1/2	MS35043-13	RC20GF102K	
R6	1 meg	20	2	9138734		
R7	0.158 meg	1	1	9024876		
R8	4700	10	1/2	MS35043-17	RC20GF472J	
R9	21,500	1	1/2	9011212		
R10	47	10	12	MS35043-5	RC20GF470K	
R11	1.62 meg	1	1	9137393		
R12	0.158 meg	1	1	9024876		
R13	21,500	1	1/2	9011212		
R14	100	10	1/2	MS35043-7	RC20GF101K	
R15	0.1 meg	1	1/2	9002937		
R16	21,500	1	1/2	9011212		
R17	0.158 meg	1	1	9024876		
R18 thru R20	68,000	10	2	MS35045-24	RC42GF683K	
R21	25,000	5	3	8010404		
R22	1 meg	1	1	8519468		
R23, R24	82,500	1	2	9024879		
R25	100	1	1/4	9010391		
R26	1 meg	10	1/2	MS35043-31	RC20GF105K	
R27	21,500	1	1/2	9011212		
R28	0.237 meg	1	1	9010166		
R29	1000	10	1/2	MS35043-13	RC20GF102K	
R30	464		1/2	8626920		
R31	10	10	1/2	MS35043-1	RC20GF100K	
R32	68,100	1	2	9137399		
R33	6810	1	1/2	9010171		
R34	0.24 meg	5	1	MS35044-158	RC32GF244J	
R35	24,000	5	1/2	MS35043-120	RC20GF243J	
R37	62,000	5	2	MS35045-130	RC42GF623J	
R38	6800	5	1/2	MS35043-107	RC20GF682J	
R39	620	5	1/2	MS35043-82	RC20GF621J	
R40	43	5	1/2	MS35043-54	RC20GF430J	

Ref desig	Value	Mfr's rating			Type, part, or drawing no.	Remarks
		Tol ±%	Watts	Volts		
R41	2000	1	1/4		9011607	
R42	6800	5	1/2		MS35043-107	RC20GF682J
R43	100	10	1/2		MS35043-7	RC20GF101K
R44	1200	5	1/2		MS35043-89	RC20GF122J
R45	6810	1	1/2		9010171	
R46	68,100	1	2		9137399	
R47	39	5	1/2		MS35043-53	RC20GF390J
R48	160	5	1/2		MS35043-68	RC20GF161J
R49	6800	5	1/2		MS35043-107	RC20GF682J
R50	1 meg	20	2		9138734	
R51	1.78 meg	1	1		9144101	
R52	25,000	5	3		8010404	
R53	6800	5	1/2		MS35043-107	RC20GF682J
RV1 thru RV3					9024874	
S1					9138804	
T1					7599403	
T2					8017765	
T3					7599403	
T4					8518481	
V1					J6AU6WB	
V2, V3					5687WA	
V4, V5					5814A	
V6, V7					5687WA	
Z1					8010775	
Z2					9986735	

CONFIDENTIAL

(U) Acquisition-Track Synchronizer 9989392—Voltage and Resistance Chart

1. General

- a. Measurements are made with all variable resistors adjusted for normal operation and all tubes in sockets.
- b. Notation 3,4 in the Pin column indicates that measurement is made between pins 3 and 4; notation 4,5 to 8 indicates that measurement is made between pin 4 and pin 8 or pin 5 and pin 8; notation 4,5 to 9 indicates that measurement is made between pin 4 and pin 9 or pin 5 and pin 9.

2. Voltage

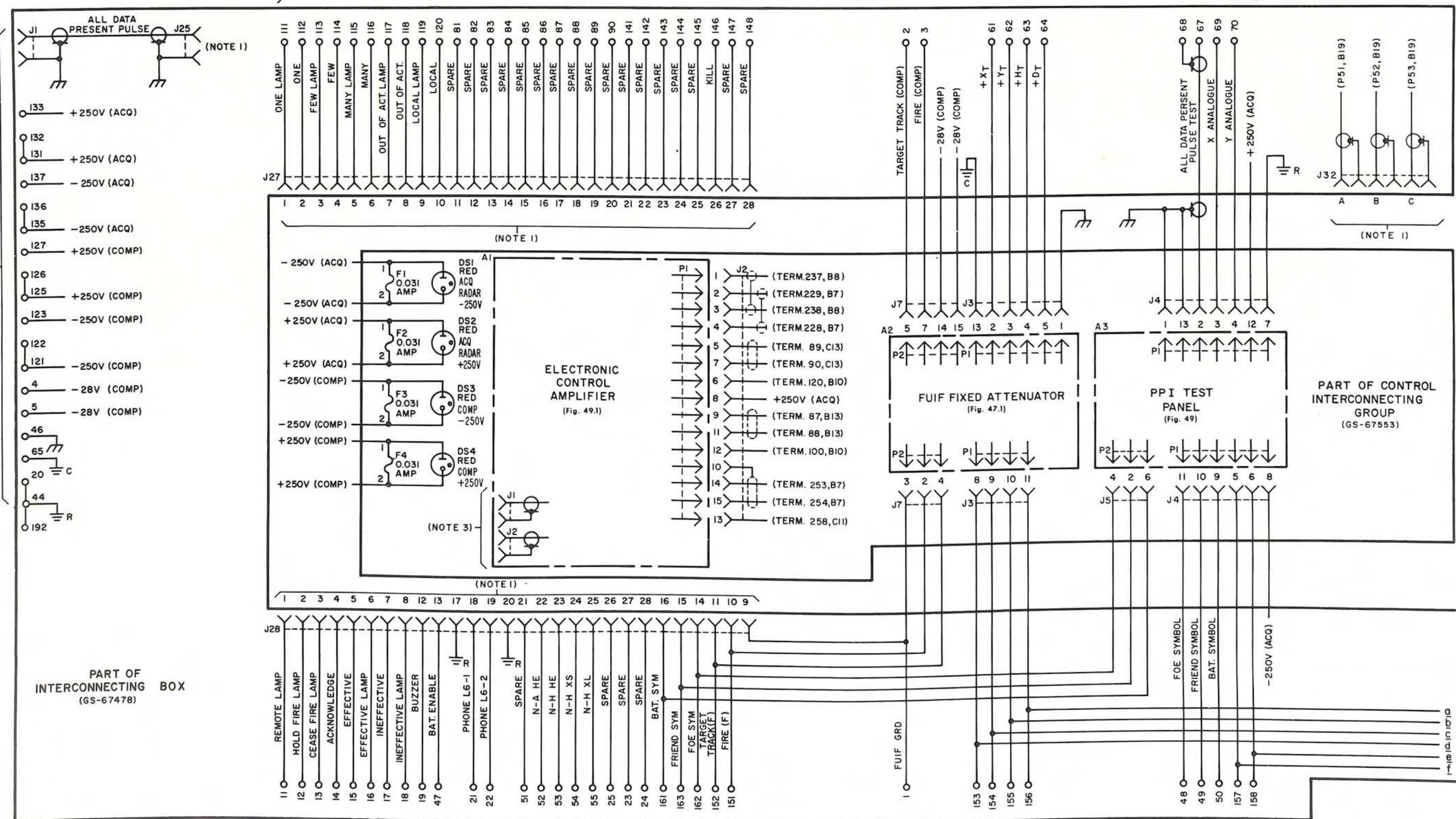
- a. Measurements are made with system energized through low voltage condition and with cables removed from J1 through J6.
- b. Measurements are made with electronic multimeter TS-505/U using the scale that permits reading nearest full scale.
- c. Voltages are +dc measured to ground unless otherwise indicated.

3. Resistance

- a. Measurements are made with multimeter TS-352/U using the scale that permits reading nearest midscale.
- b. Measurements are made with all external cables disconnected.
- c. Resistances are measured to ground unless otherwise indicated.
- d. On connector P1, strap pins 2, 7, 8, and 13 together.

Ref desig		Tube type	Tube function	Plate			Suppressor			Screen			Control			Cathode			Filament		
				Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms	Pin	Volts	Ohms
Socket	Tube																				
XV1	V1	6AU6WB	Sync amplifier	5	185	47,000	2	0	0	6	185	100,000	1	0	0.22 meg	7	4.9	2,200	3 to 4	6.3 ac	< 1
XV2	V2A	5687WA	Rep rate blocking oscillator	1	250	1,000	9	250	1,100				2	-82	2.12 meg	3	—	200	4,5 to 8	6.3 ac	< 1
	V2B		Sync pulse blocking oscillator																		
XV3	V3A	5687WA	Delay MVB	1	235	0.1 meg	9	2.8	0.115 meg				2	-30	19,000	3	0	0	4,5 to 8	6.3 ac	< 1
	V3B		Pulse delay																		
XV4	V4A	5814A	Delay MVB	1	235	0.1 meg	6	75	23,000				2	-30	19,000	3	0	0	4,5 to 9	6.3 ac	< 1
	V4B																				
XV5	V5A	5814A	Pulse delay amplifier	1	27	41,000	6	250	1,000				2	2.6	2,000	3	0.54	100	4,5 to 9	6.3 ac	< 1
	V5B																				
XV6	V6A	5687WA	MTI test pulse blocking oscillator	1	0	6,800	9	0	6,800				2	-22	22,000	3	0	6,800	4,5 to 8	6.3 ac	< 1
	V6B																				
XV7	V7A	5687WA	Transmitter sync blocking oscillator	1	250	1,000	9	250	1,000				2	-30	23,000	3	0	0	4,5 to 8	6.3 ac	< 1
	V7B																				

< Less than.



(NOTE 3)

Figure 94 (U). Auxiliary acquisition control interconnecting group 9998063 and auxiliary acquisition control interconnecting box 9996460—schematic diagram (sheet 1 of 5) (U).

CONFIDENTIAL

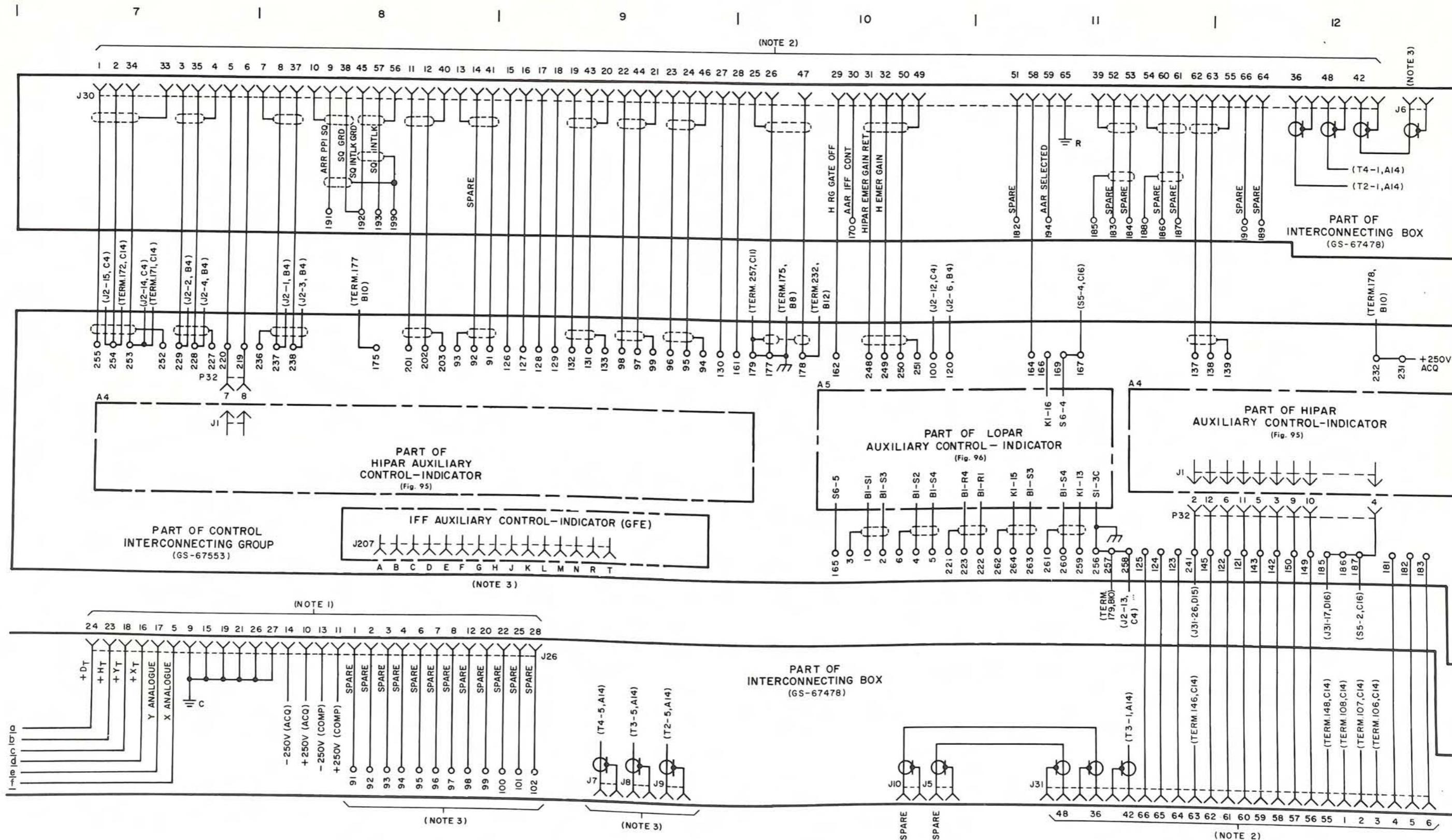


Figure 94 (U). Continued (*sheet 2 of 5*).

CONFIDENTIAL

ORD G252445

13

14

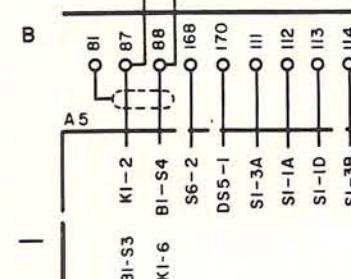
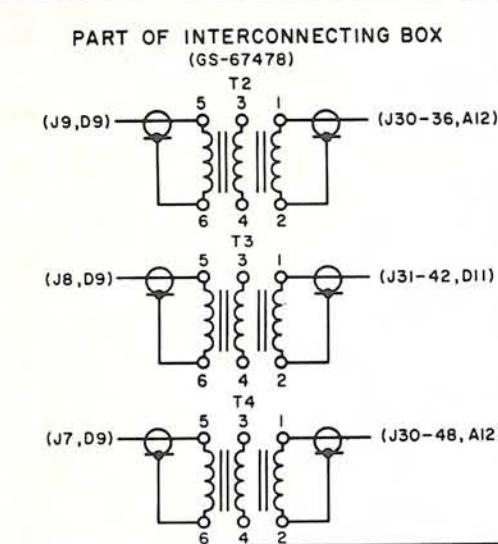
15

16

17

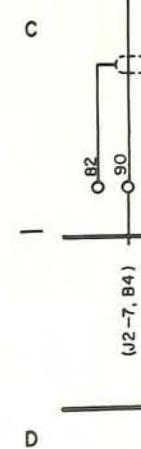
18

A



PART OF LOPAR AUXILIARY CONTROL-INDICATOR (GS-67480)

PART OF HIPAR AUXILIARY CONTROL-INDICATOR (Fig. 95)



HIFF GAIN

O197

47

19

51

31

32

49

50

33

34

35

7

8

37

10

38

39

11

12

40

13

14

41

20

21

44

22

23

46

54

52

53

26

27

15

18

16

30

29

17

J31

(NOTE 2)

PART OF INTERCONNECTING BOX (GS-67478)

Figure 94 (U). Continued (sheet 8 of 5).

CONFIDENTIAL

19

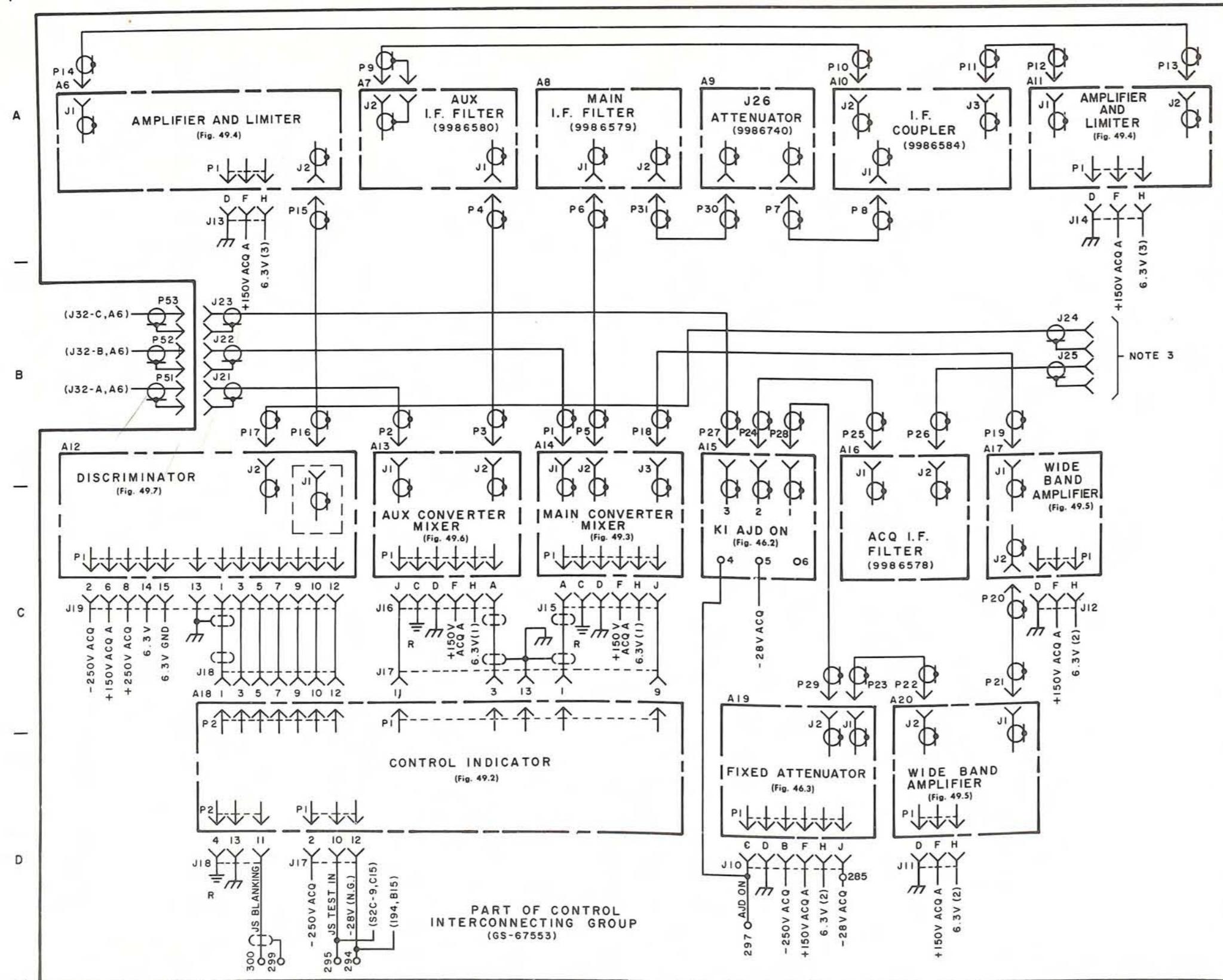
20

21

22

23

24



NOTES:

1. REFER TO TM9-1430-254-20/2
2. REFER TO TM9-1430-254-20/3
3. REFER TO SCHEMATIC OF TRAILER MOUNTED DIRECTOR STATION (GS-67471) 9993053
4. UNUSED FACILITIES NOT SHOWN IN BODY OF SCHEMATIC ARE AS FOLLOWS:
J3-6,7,12,14,15
J4-8,14,15
J5-1,3,5,7,8,9,10,11,12,13,14,15
J7-1,6,8,9,10,11,12,13
5. CONNECTOR J20 IS NOT USED IN THIS MODIFICATION AND IS PROVIDED FOR FUTURE USE
6. UNUSED FACILITIES ADDED BY THE LAJD MODIFICATION AND NOT SHOWN IN BODY OF SCHEMATIC ARE AS FOLLOWS:
CPI
J10-A,E
J11-A,B,C,E,J
J12-A,B,C,E,J
J13-A,B,C,E,J
J14-A,B,C,E,J
J15-B,E
J16-B,E
J17-4,5,6,7,8,14,15
J18-2,6,8,14,15
J19-4,11
J20-1,3,4,5,7,9,10,11,12
K1-6
7. TERMINAL LOCATED ON SHEET 5.

Figure 94 (U). Continued (sheet 4 of 5).

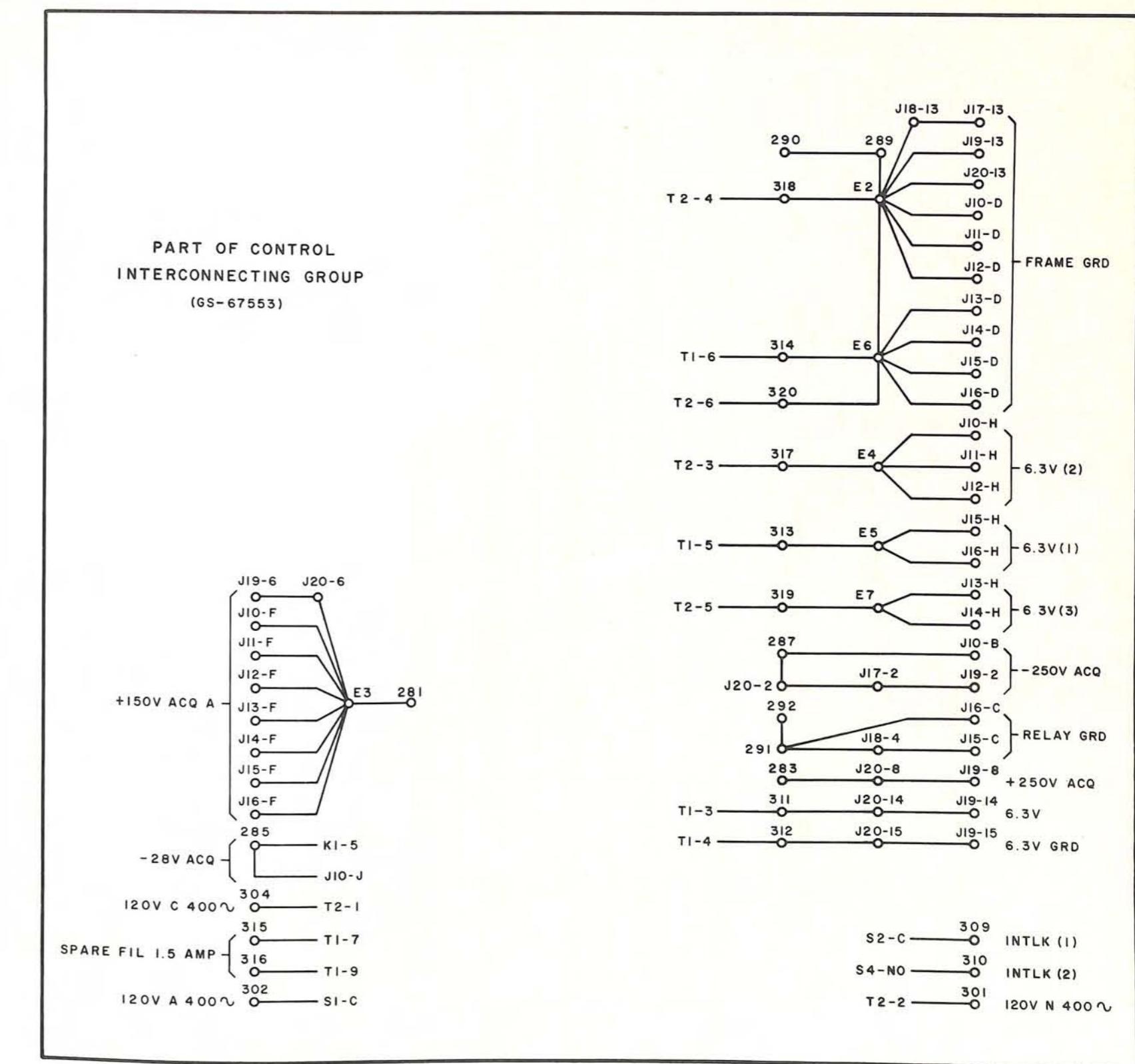
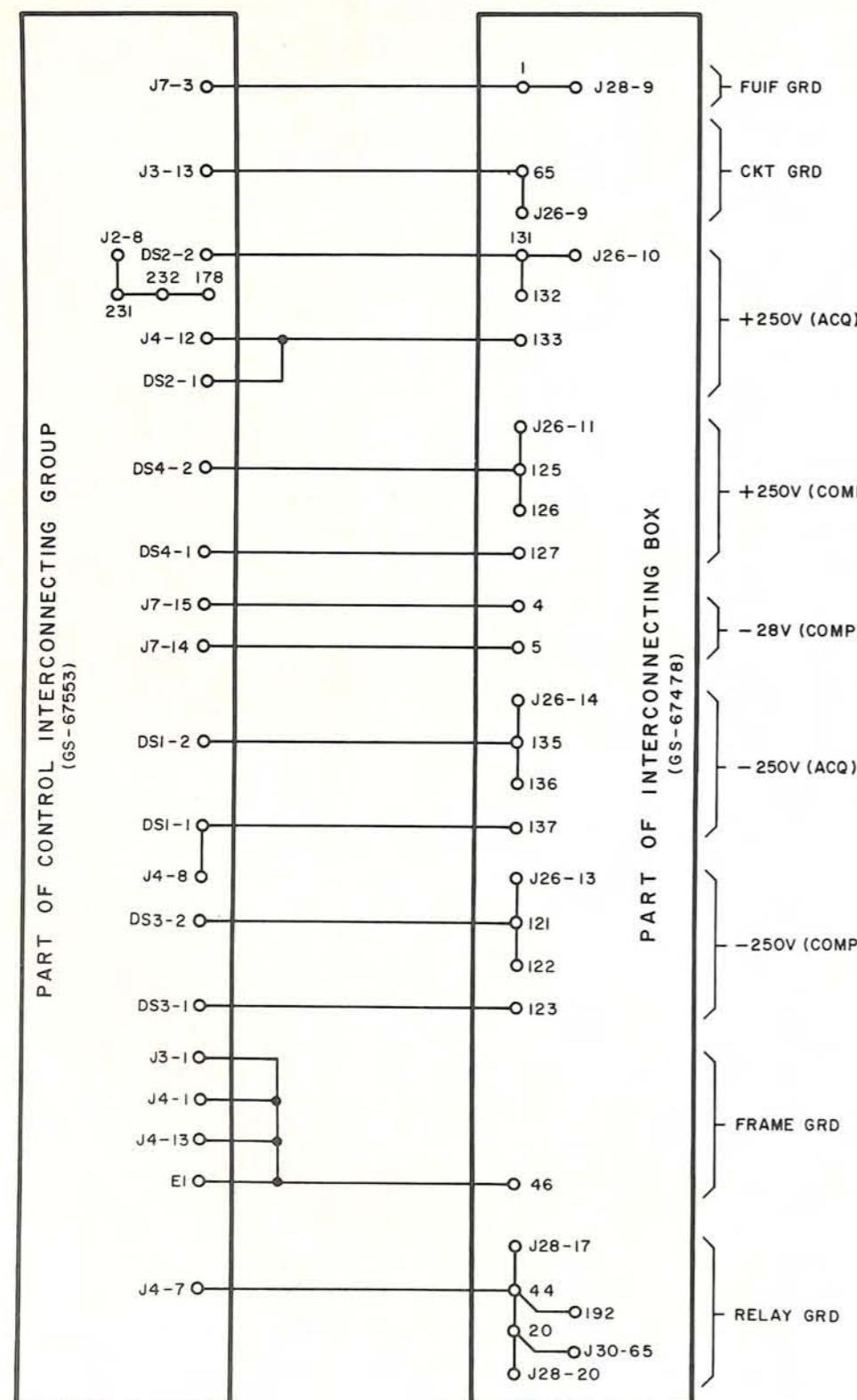


Figure 94 (U). Continued (sheet 5 of 5).

CONFIDENTIAL

(U) Index of Terminals— Auxiliary Acquisition Interconnecting Box								(U) Index of Terminals—Auxiliary Acquisition Interconnecting Group																
Terminal	Location	Terminal	Location	Terminal	Location	Terminal	Location	Terminal	Location	Terminal	Location	Terminal	Location	Terminal	Location	Terminal	Location	Terminal	Location	Terminal	Location	Terminal	Location	
1	D4	55	D3	109	NC	163	D3	1	C10	55	NC	109	C13	163	NC	217	B16	271	NC					
2	A4	56	NC	110	NC	164	NC	2	C10	56	NC	110	C13	164	B11	218	C16	272	NC					
3	A4	57	NC	111	A2	165	NC	3	C10	57	NC	111	B13	165	C10	219	E7	273	NC					
4	B1	58	NC	112	A2	166	NC	4	C10	58	NC	112	B13	166	B11	220	B7	274	NC					
5	C1	59	NC	113	A2	167	NC	5	C10	59	NC	113	B13	167	B11	221	C10	275	NC					
6	NC	60	NC	114	A2	168	NC	6	C10	60	NC	114	B13	168	B13	222	C11	276	NC					
7	NC	61	A5	115	A2	169	NC	7	NC	61	NC	115	NC	169	B11	223	C10	277	NC					
8	NC	62	A5	116	A2	170	A10	8	NC	62	NC	116	NC	170	B13	224	NC	278	NC					
9	NC	63	A5	117	A2	171	NC	9	NC	63	NC	117	NC	171	C14	225	NC	279	NC					
10	NC	64	A5	118	A2	172	NC	10	NC	64	NC	118	NC	172	C14	226	NC	280	NC					
11	D2	65	C1	119	A2	173	NC	11	NC	65	NC	119	NC	173	C14	227	B7	281	Note 7					
12	D2	66	NC	120	A2	174	NC	12	NC	66	NC	120	B10	174	NC	228	B7	282	NC					
13	D2	67	A6	121	B1	175	NC	13	NC	67	NC	121	C12	175	B8	229	B7	283	Note 7					
14	D2	68	A5	122	B1	176	NC	14	NC	68	NC	122	C12	176	C15	230	C15	284	NC					
15	D2	69	A6	123	B1	177	NC	15	NC	69	NC	123	C11	177	B10	231	B12	285	D21					
16	D2	70	A6	124	NC	178	NC	16	NC	70	NC	124	C11	178	B10	232	B12	286	NC					
17	D2	71	D14	125	B1	179	NC	17	NC	71	NC	125	C11	179	B10	233	NC	287	Note 7					
18	D2	72	D14	126	B1	180	NC	18	NC	72	NC	126	B9	180	C15	234	NC	288	NC					
19	D2	73	NC	127	B1	181	D14	19	NC	73	NC	127	B9	181	C12	235	NC	289	Note 7					
20	C1	74	NC	128	NC	182	A11	20	NC	74	NC	128	B9	182	C12	236	B3	290	Note 7					
21	D3	75	NC	129	NC	183	A11	21	NC	75	NC	129	B9	183	C12	237	B8	291	Note 7					
22	D3	76	NC	130	NC	184	A11	22	NC	76	NC	130	B9	184	C14	238	B8	292	Note 7					
23	D3	77	NC	131	A1	185	A11	23	NC	77	NC	131	B9	185	B12	239	C15	293	NC					
24	D3	78	NC	132	A1	186	A11	24	NC	78	NC	132	B9	186	C12	240	NC	294	D20					
25	D3	79	NC	133	A1	187	A11	25	NC	79	NC	133	B9	187	C12	241	C11	295	D20					
26	NC	80	NC	134	D14	188	A11	26	NC	80	NC	134	NC	188	C14	242	C15	296	NC					
27	NC	81	A3	135	B1	189	A12	27	NC	81	B13	135	NC	189	C14	243	C15	297	D21					
28	NC	82	A3	136	B1	190	A12	28	NC	82	C13	136	NC	190	C14	244	C16	298	NC					
29	NC	83	A3	137	B1	191	A8	29	NC	83	NC	137	B11	191	B15	245	C16	299	D20					
30	NC	84	A3	138	NC	192	A8	30	NC	84	NC	138	B11	192	B15	246	C16	300	D19					
31	NC	85	A3	139	NC	193	A8	31	NC	85	NC	139	B12	193	B15	247	C16	301	D18					
32	NC	86	A3	140	NC	194	A11	32	NC	86	C15	140	B14	194	B15	248	B10	302	D18					
33	NC	87	A3	141	A3	195	D15	33	NC	87	B13	141	C13	195	B15	249	B10	303	NC					
34	NC	88	A3	142	A3	196	D15	34	NC	88	B13	142	C12	196	NC	250	B10	304	C18					
35	NC	89	A3	143	A3	197	D13	35	NC	89	C13	143	C12	197	NC	251	B10	305	NC					
36	NC	90	A3	144	A3	198	D15	36	NC	90	C13	144	NC	198	B15	252	B7	306	NC					
37	NC	91	D8	145	A4	199	A8	37	NC	91	B8	145	C11	199	B15	253	B7	307	NC					
38	NC	92	D8	146	A4	200	D15	38	NC	92	B8	146	C14	200	NC	254	B7	308	NC					
39	NC	93	D8	147	A4	201	D15	39	NC	93	B8	147	C13	201	B8	255	B7	309	C17					
40	NC	94	D8	148	A4	202	D15	40	NC	94	B9	148	C14	202	B8	256	C11	310	C17					
41	NC	95	D8	149	NC	203	D14	41	NC	95	B9	149	C12	203	B8	257	C11	311	C18					
42	NC	96	D8	150	NC	204	D15	42	NC	96	B9	150	C12	204	NC	258	C11	312	C18					
43	NC	97	D8																					

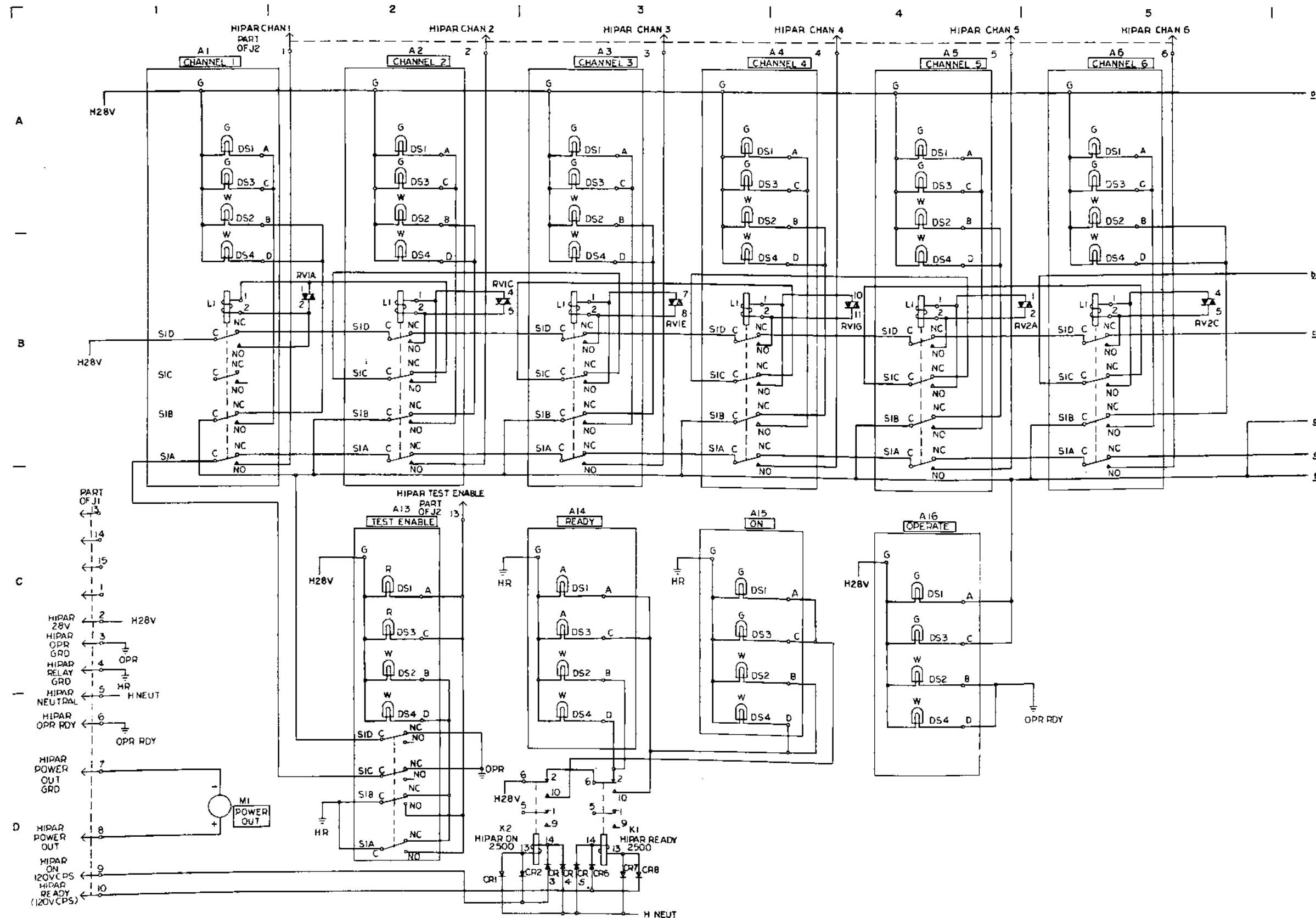
CONFIDENTIAL - Modified Handling
Authorized

C12

(U) Auxiliary Acquisition Control Interconnecting Group 9998063 and Auxiliary
Acquisition Control Interconnecting Box 9996460—Apparatus List

Ref desig	Value	Mfr's rating			Type, part, or drawing no.	Remarks
		Tol ±%	Watts	Volts		
Items listed below are part of GS-67553						
A1					9990729	GS-64261
A2					9984404	GS-65849
A3					9136426	GS-57296
A4					9996155	GS-66095
A5					9989496	GS-67480
A6					9156529	GS-64186
A7					9986580	Filter (52 mc)
A8					9986579	Filter (48 mc)
A9					9986740	Attenuator (J26)
A10					9986584	IF coupler
A11					9156529	GS-64186
A12					9990650	GS-64183
A13					9990588	GS-64182
A14					9990577	GS-64181
A15					9986612	K1 ADJ
A16					9986578	Filter (60 mc)
A17					9990700	GS-64198
A18					9990687	GS-64196
A19					9993003	GS-66070
A20					9990700	GS-64198
DS1 thru DS4					7605718	
DS5					9005455	
DS6					9005457	
F1 thru F4					MS90078-2	
J2 thru J6					9150422	
J10 thru J16					8531068	
J17 thru J20					9150422	
J21 thru J25					MS35731-910A	
P1 thru P31					MS35168-88D	
P32, P33					9150422	
S1 thru S4					7602749	
S5					MS35059-23	
T1, T2					7605345	
TB					9139028-1	
Items listed below are part of GS-67478						
J1 thru J10					MS35181-910A	
J25					MS35181-910A	
J26 thru J28					7632527	
J30					9144371	
J31					9138667	
J32					8016481	
P51 thru P53					MS35168-1	
T2 thru T4					8017765	
TB					7634159	
Body						

CONFIDENTIAL



ORD G252386

Figure 95 (U). HIPAR auxiliary control-indicator 9996155—schematic diagram (sheet 1 of 2) (U).

CONFIDENTIAL

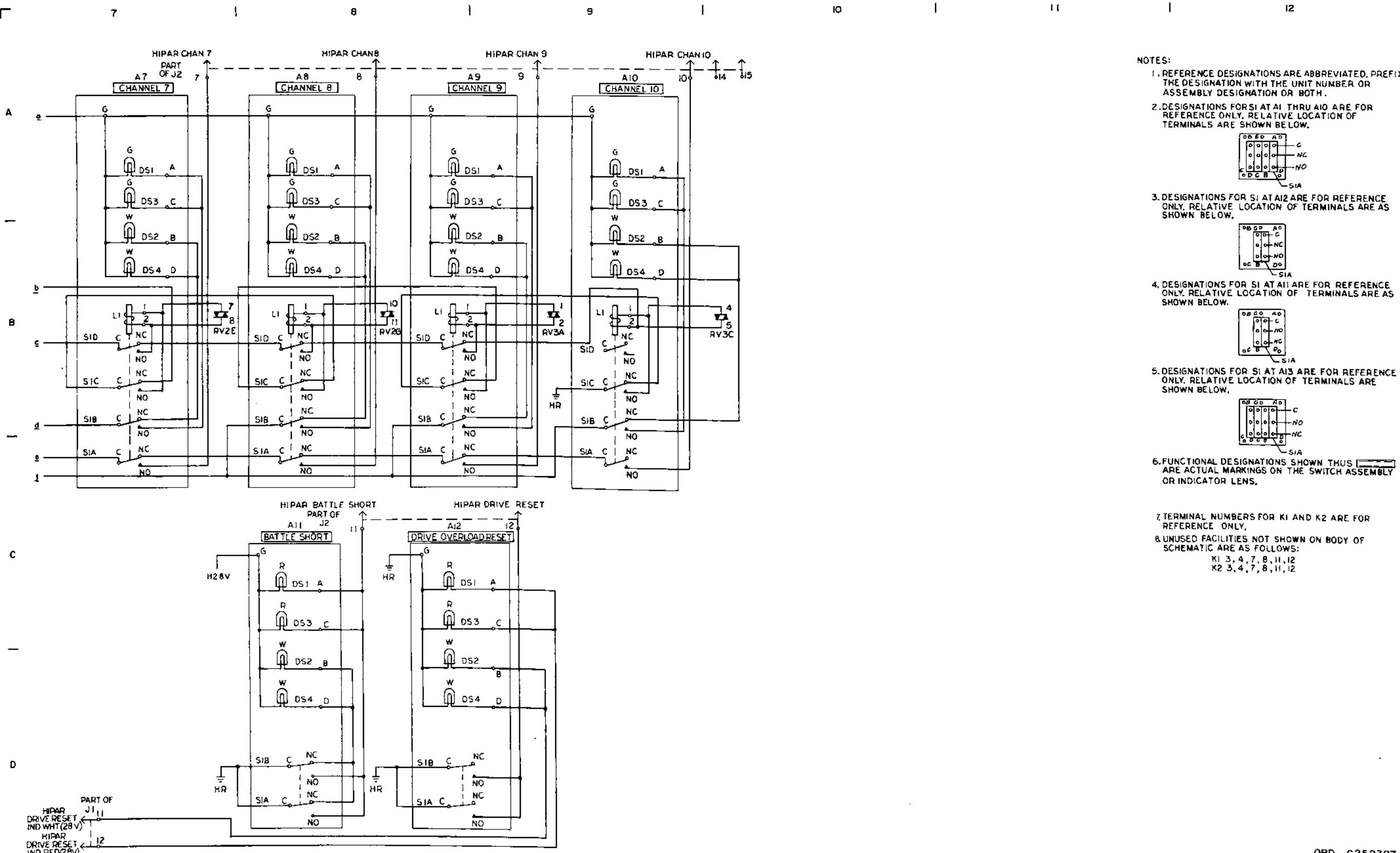


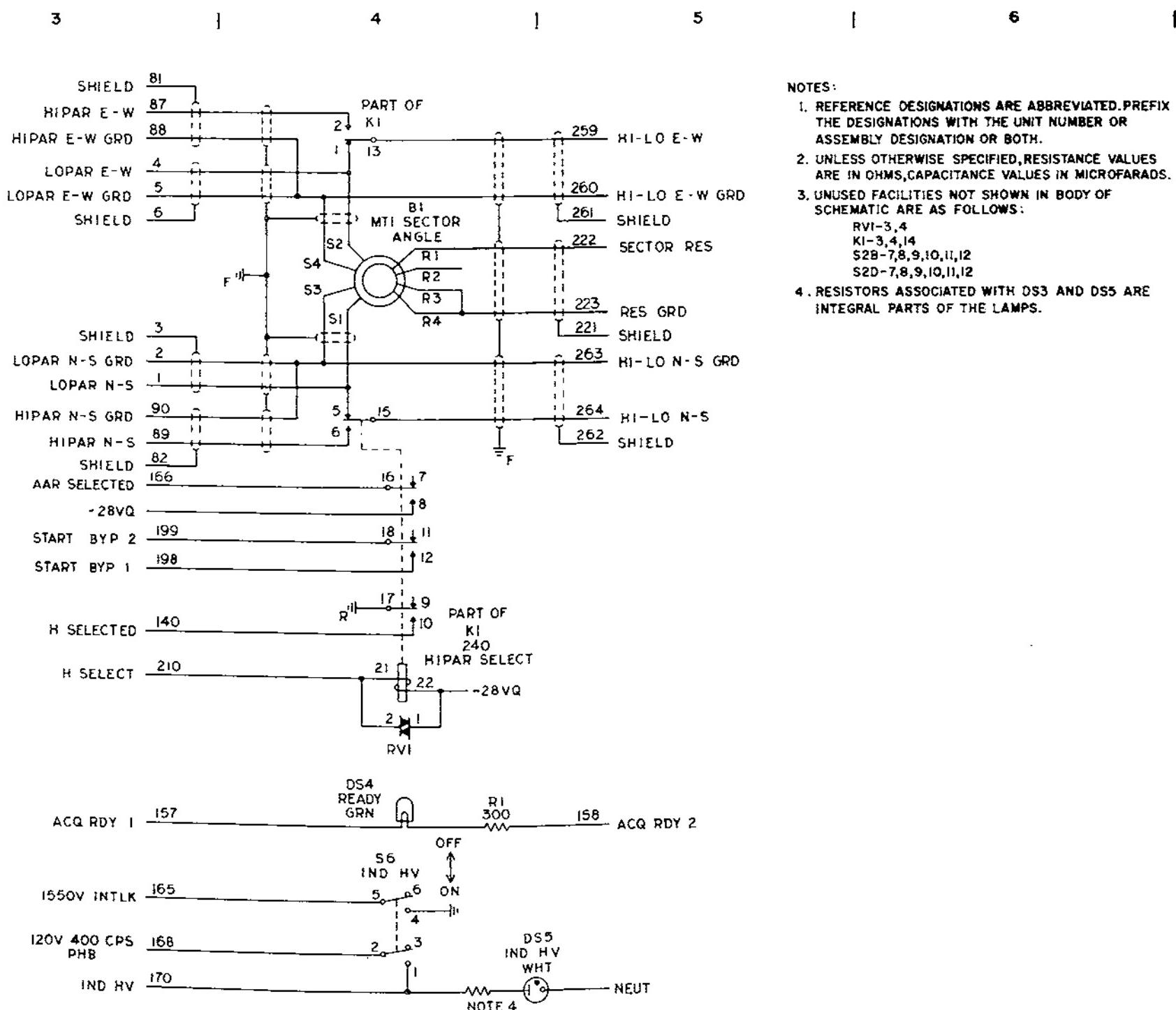
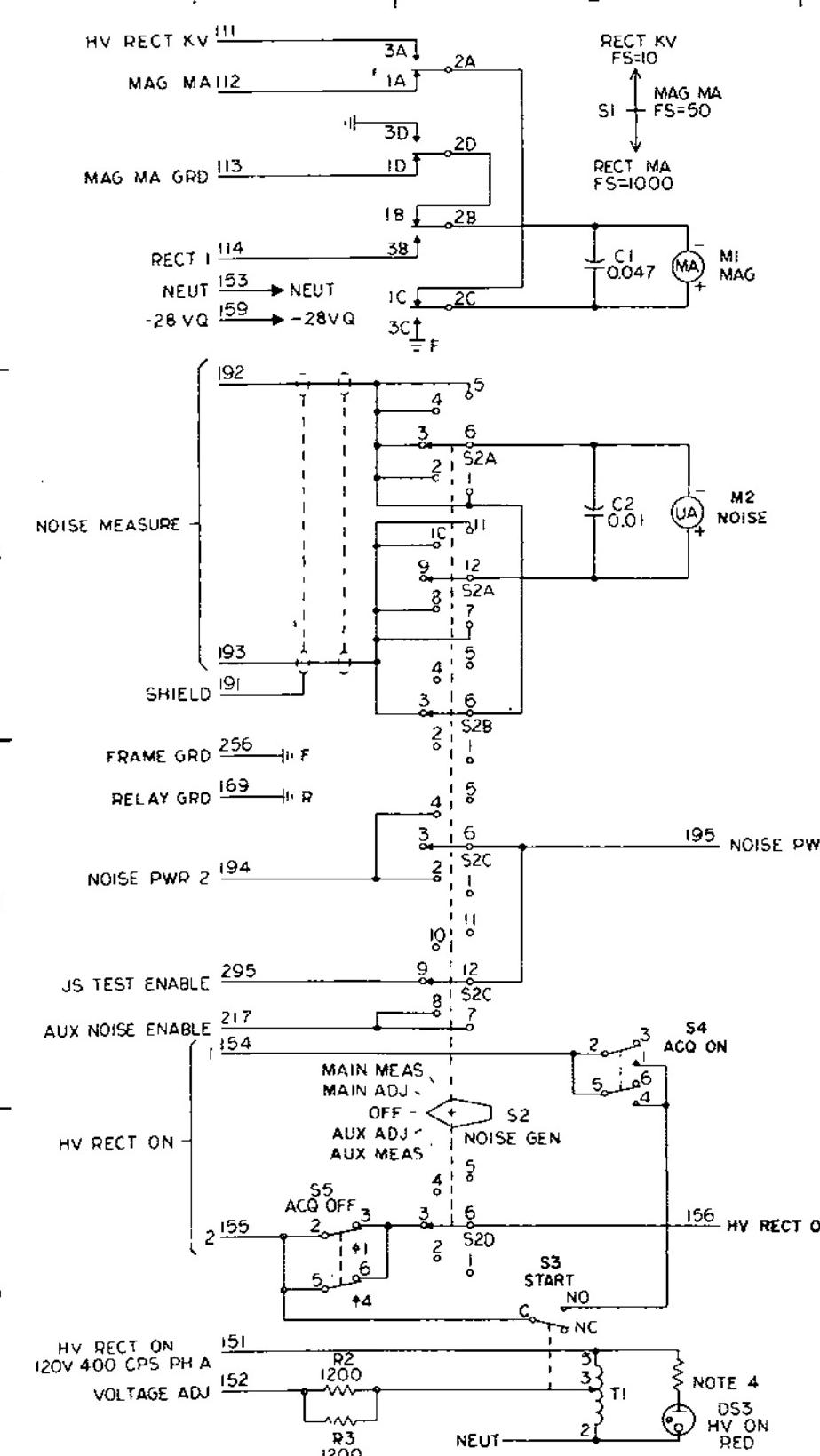
Figure 95 (U). Continued (sheet 2 of 2).

CONFIDENTIAL

(U) HIPAR Auxiliary Control-Indicator 9996155—Apparatus List

Ref desig	Value	Mfr's rating			Type, part, or drawing no.	Remarks
		Tol ±%	Watts	Volts		
A1					9986902	
A2					9986902-20	
A3					9986902-21	
A4					9986902-22	
A5					9986902-23	
A6					9986902-24	
A7					9986902-25	
A8					9986902-26	
A9					9986902-27	
A10					9986902-28	
A11					9986901-18	
A12					9986901-20	
A13					9986901-425	
A14					9986903-2	
A15					9986903-3	
A16					9986903	
J1, J2					9150421	
CR1 thru					1N3191	
CR8						
K1, K2					9986949	
M1					9976301	
RV1 thru					7599075	
RV3	2500					

CONFIDENTIAL



NOTES:

1. REFERENCE DESIGNATIONS ARE ABBREVIATED. PREFIX THE DESIGNATIONS WITH THE UNIT NUMBER OR ASSEMBLY DESIGNATION OR BOTH.
2. UNLESS OTHERWISE SPECIFIED, RESISTANCE VALUES ARE IN OHMS, CAPACITANCE VALUES IN MICROFARADS.
3. UNUSED FACILITIES NOT SHOWN IN BODY OF SCHEMATIC ARE AS FOLLOWS:
RVI-3,4
KI-3,4,14
S2B-7,8,9,10,11,12
S2D-7,8,9,10,11,12
4. RESISTORS ASSOCIATED WITH DS3 AND DS5 ARE INTEGRAL PARTS OF THE LAMPS.

58
61
6284.2
86112.2
12.18

1.50

ORD G252260

Figure 96 (U). LOPAR auxiliary control-indicator 9989496—schematic diagram (U).

TECHNICAL MANUAL
No. 9-1430-257-20

HEADQUARTERS,
DEPARTMENT OF THE ARMY
WASHINGTON, D. C., 7 October 1959

UNIT SCHEMATICS ACQUISITION RADAR SYSTEM (LESS HIPAR) (U)

CHAPTER	Section	Paragraph	Page
I.	I. INTRODUCTION		
	General	1	11
	Scope	2	16
	Contents	2.1	16
	Forms, Records, and Reports	2.2	16
	Comments, Criticisms, and Corrections		
	II. Diagrams		
	General	3	17
	Description	4	17
	Explanation of ground symbols	5	17
	III. Voltage and resistance charts		
	General	6	20.5
	Description	7	20.5
	Socket voltage measurements	8	20.5
	Socket resistance measurements	9	20.5
	IV. Apparatus lists		
General	10	20.5	
Description	11	20.5	
V. Waveforms, abbreviations, and relay types			
Waveforms	12	20.5	
Abbreviations	13	20.5	
Relay types	14	20.6	
VI. Schematic effectivity	15	20.10	
CHAPTER	2. NIKE-HERCULES SCHEMATIC DIAGRAMS		
II.	I. Trailer mounted director station	Figure	Page
	Trailer mounted director station 9985678—schematic diagram (17 sheets) and associated apparatus list	2	22
	Trailer mounted director station 9985689—schematic diagram (18 sheets) and associated apparatus list	2.1	40
	Trailer mounted director station 9988601—schematic diagram (17 sheets) and associated apparatus list	2.2	40.36
	Trailer mounted director station 9988606—schematic diagram (18 sheets) and associated apparatus list	2.3	40.70
	II. Battery control console		
	Battery control console 8173147—schematic diagram (8 sheets) and associated apparatus list	3	40.106
	Battery control console 8173147—schematic diagram (with auxiliary acquisition radar modification) (9 sheets) and associated apparatus list	3.1	48
	Battery control console 8173147 (with antijam display capability)—schematic diagram (8 sheets) and associated apparatus list	3.2	48.18
	Battery control console 8173147 (with auxiliary acquisition radar modification and antijam display capability)—schematic diagram (9 sheets) and associated apparatus list	3.3	48.34
	PPI 9989036—schematic diagram (2 sheets) and associated apparatus list	4	48.52
	Modulation eliminator 8517883 or 9007951—schematic diagram and associated apparatus list	5	51
	Sweep generator 8518032—schematic diagram and associated apparatus list	6	52
	Sweep generator 8518032—voltage and resistance chart		54

*This manual supersedes portions of TM 9-5090-3-1, 10 May 1957, including C1, 16 May 1958, and C2, 25 August 1958, as pertains to this manual.

**These changes supersede TB 9-1430-257-20/1, 8 January 1960; TB 9-1430-257-20/2, 5 February 1960; TB 9-1430-257-20/3, and TB 9-1430-257-20/4, 3 March 1960.

Section	II.	III.	Figure	Page
II.	Battery control console—Continued			
PPI DC amplifier 9005503—schematic diagram and associated apparatus list			7	55
PPI DC amplifier 9005503—voltage and resistance chart				57
PPI video amplifier 9142869—schematic diagram and associated apparatus list			8	58
PPI video amplifier 9142869—voltage and resistance chart				61
PPI video amplifier 9985598—schematic diagram and associated apparatus list			8.1	62
PPI video amplifier 9985598—voltage and resistance chart				62.3
PPI marker generator 9007680—schematic diagram and associated apparatus list			9	62.4
PPI marker generator 9007680—voltage and resistance chart (2 sheets)				66
Precision indicator 9007681—schematic diagram and associated apparatus list			10	68
Precision indicator 9985665—schematic diagram (3 sheets) and associated apparatus list			10.1	68.2
Range sweep generator 7617885 or 8607326—schematic diagram and associated apparatus list			11	69
Range sweep generator 7617885 or 8607326—voltage and resistance chart				71
Azimuth sweep generator mixer stage 7620604—schematic diagram and associated apparatus list			12	72
Azimuth sweep generator mixer stage 7620604—voltage and resistance chart				73
Mark generator 9007682—schematic diagram and associated apparatus list			13	74
Mark generator 9007682—voltage and resistance chart				76
Precision video amplifier 7620605—schematic diagram and associated apparatus list			14	77
Precision video amplifier 7620605—voltage and resistance chart				79
Battery signal panel-indicator 10184906—schematic diagram (4 sheets) and associated apparatus list			15	80
Tactical control-indicator 9989030—schematic diagram and associated apparatus list			16	84
PPI HV power supply 9142872—schematic diagram and associated apparatus list			17	84.2
Target designate control-indicator 9993474—schematic diagram (2 sheets) and associated apparatus list			18	86
Low-power servo amplifier 7614253—schematic diagram and associated apparatus list			19	89
Low-power servo amplifier 7614253—voltage and resistance chart				91
Acquisition range generator 9007684—schematic diagram and associated apparatus list			20	92
Acquisition range generator 9007684—voltage and resistance chart				95
Acquisition control-indicator 9993484—schematic diagram and associated apparatus list			21	96
Acquisition control-indicator 9985604—schematic diagram (2 sheets) and associated apparatus list			21.1	98.2
Acquisition control-indicator 9988650—schematic diagram (2 sheets) and associated apparatus list			21.2	98.6
STC 8512082—schematic diagram and associated apparatus list			22	99
STC 8512082—voltage and resistance chart				101
—28v power supply 8512751 or 9986424—schematic diagram and associated apparatus list			23	102
Gong control relay assembly 8012372—schematic diagram and associated apparatus list			24	103
Auxiliary acquisition relay assembly 9985525—schematic diagram (2 sheets) and associated apparatus list			24.1	104
III. Director station group				
Director station group 8513626—schematic diagram (7 sheets) and associated apparatus list			25	104.4
Director station group 8513626 (with auxiliary acquisition radar modification)—schematic diagram (7 sheets) and associated apparatus list			25.1	112.2
Director station group 8513626 (with antijam display capability)—schematic diagram (8 sheets) and associated apparatus list			25.2	112.18
Director station group 8513626 (with auxiliary acquisition radar modification and antijam display capability)—schematic diagram (8 sheets) and associated apparatus list			25.3	112.34
Cathode follower amplifier 9998354—schematic diagram and associated apparatus list			25.4	112.50